AN INVESTIGATION INTO CARE STAFF KNOWLEDGE OF THE CONCEPT OF A LEARNING DISABILITY AND WHETHER A TRAINING PACKAGE CAN ALTER ANY DEFICITS IN THIS KNOWLEDGE

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Declaration

I declare that the work contained herein is my own and has not been submitted for any other degree or professional qualification.

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Abstract

Introduction: Due to the changing terminology used to describe people with a learning disability (Digby, 1996) the general population has become confused about the definition (Davey, 1997; Reid, 1997; Gath, 1992). Care staff employed to work with this client group can also lack knowledge about what constitutes a learning disability (McKenzie *et al.,* 1999b). This thesis aims to examine care staff understanding of the concept of a learning disability, their understanding of the individual difficulties faced by someone with a learning disability and their role in providing support. A one-day training programme (MacKinnon *et al.,* 2004) was implemented and changes in carer knowledge was measured.

Method: There are two components to this study. Part one is a quantitative, questionnaire based study, examining participants' knowledge of the concept of a learning disability and its associated deficits both pre and post training. Care staff were invited to attend a training day based on the 'Understanding Learning Disabilities' package (MacKinnon *et al.,* 2004). Participant knowledge was measured and analysed pre and post training. Part two is a qualitative study that used Interpretive Phenomenological Analysis to explore participants' understanding of the training and its impact on their practice.

Results: After training, participants' knowledge of a learning disability and its associated deficits had significantly increased. This knowledge was retained when measured one month later. Qualitative analysis indicated that participants struggled

to either remember or articulate its content twelve months later although they reported benefits, including enjoyment and experiencing an increase in confidence after attending. Participants also discussed difficulties with regard to its practical utilisation including; knowing what to do when strategies failed, struggling when personal beliefs clashed with practical advice, appropriately balancing duty of care and feeling abandoned due to a lack of managerial support.

Discussion: This study increased participant knowledge of the concept of learning disability and associated cognitive deficits by using a standardised training package (MacKinnon *et al.,* 2004). Several study limitations were observed both methodologically and ethically. The study did not adequately address the practical utilisation of the training at the one month follow-up; therefore an Interpretive Phenomenological Approach (IPA) was used to examine this. IPA illustrated benefits not identified during part one of the study including enjoyment and increased confidence about working with this client group. Several practice and training related difficulties were highlighted. Participants also placed importance on several carer qualities that reflected those identified by the literature examining therapeutic alliance (Gilbert *et al.,* 2008; Norcross, 2002; Horvath, 2006; Meissner, 2006).

Conclusion: A one-day training package examining participants' knowledge of a learning disability and its associated cognitive deficits significantly increased knowledge in these areas. These knowledge gains were maintained one month later. Twelve months later participants identified some positive aspects of the training

although they struggled to remember its content, and experienced difficulties with technical language and articulating concepts. Participants were generally able to demonstrate their knowledge using examples taken from their work.

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Contents

Chapter 1. Introduction

The term 'learning disability' has been developed over time as a result of the changing attitudes of society regarding the client group (Digby, 1996). The group of people described as having a learning disability is disparate (British Psychological Society, 2000). These factors may have contributed to the confusion among the general public and care workers about the actual definition of a learning disability (Davey, 1997; Reid, 1997; Gath, 1992). Previous research has indicated that staff working with people with a learning disability can lack knowledge about what having a 'learning disability' means for their clients (McKenzie *et al.,* 1999b). There has been little research into staff understanding of the cognitive difficulties associated with having a learning disability, the problems that these difficulties may cause and the implications for practice. The present study aims to examine the extent to which a one-day training programme can improve staff knowledge and understanding in these areas.

The introduction begins with an outline of the procedure used to systematically review the literature used for the study. This is followed by an outline of the terminology used during the study and examines any difficulties or confusion that have arisen as a result of the terminology. The main cognitive difficulties that are associated with a learning disability are then examined, followed by an outline of the policy and research contexts within which the thesis is based. The introduction finishes by outlining the aims and hypotheses.

1.1 Identification of Papers Used

The OVID search engine and Web of Information were used to source the papers used during this study. Within the OVID search engine the following individual databases were used to conduct literature searches; OVID Medline ®, Embase and PsychINFO. Limitations were placed on the searches. Only papers published between 1996 and 2008 were searched for and no foreign language papers were examined.

The following terms used to describe people with a learning disability were searched for: 'learning disability', 'intellectual disability', 'mental retardation' and 'mental handicap'. The term 'learning difficulty' was not examined due to it being associated with specific learning disabilities such as dyslexia (Reid, 1997).

These terms were cross-referenced with the following key words in order to produce a selection of papers worth reading. These were; 'classification', 'terminology', 'diagnosis', 'labelling', 'staff', 'carers', 'workers', 'knowledge', 'understanding', 'training', 'theory', 'practise', 'practice', 'work' and 'approach'. Potentially useful papers were identified and their abstracts were examined. If the abstracts indicated that the papers would be useful for the study then the full article was obtained.

The references of each paper were examined and any papers thought to be of use were also read. Research that was cited in more than one useful paper was examined

wherever possible. Table 1 provides a summary of the key papers examined during this thesis.

1.2 Terminology Used During This Study

'Mental retardation' is the official term used in the ICD-10 (World Health Organisation, 1992) and DSM-IV-TR (American Psychiatric Association, 2000) diagnostic manuals with this disorder. This is however not the term commonly used within the United Kingdom (Reid, 1997). The word 'retardation' can be perceived to be offensive to people within the United Kingdom and due to this, the term learning disability has been adopted (Reid, 1997) and is used in this thesis. As a result, all references within this study are made to people as having a 'learning disability'. This label is being used in the same way as 'mental retardation' is intended to be used by the diagnostic manuals. It must be noted that the term 'intellectual disability' is increasingly being used within the United Kingdom as a result of its frequent use within academic publications (Reid, 1997) and it has been adopted as a diagnostic term in the United States (Shalock *et al,*. 2007).

The terminology of learning disability has a long history and many different labels have been used to identify this client group (Digby, 1996). Due to social dynamics the labels have changed over time (Digby, 1996) and as a result of this evolution some of the different labels that have been used will be discussed in order to allow the reader to understand the historical difficulties associated with labelling this client group.

Author	Year	Study	Sample Size & Statistics	Power and Effect size	Strengths	Weaknesses
Hastings	1995	Interview based study examining staff beliefs regarding challenging behaviour	n = 19 Content Analysis	n/a	- Excellent levels of inter-rater agreement	- Small sample - Participants were only recruited from one site
Jones *et al.*,	1999	Observation based study examining the effects of staff training in active support on levels of activity within 5 houses	n = 19 Mann-Whitney U	- If assume effect size of 0.6 Mann-Whitney power 0.45	- Longitudinal study operating over a 12 month period - Factored out any pre-training interventions to try to eliminate effects of this	- Attitudes were not measured - One observer reliability score was lower than the others which may warrant attention
Kalsy *et al.*	2006	Questionnaire and vignette based study examining staff beliefs, knowledge and optimism of people with Down Syndrome and dementia	n = 97 t – test and correlation	For 'training effect on knowledge - Effect size = 0.44 (med) - Power >0.99 (t test and correlation)	- A variety of types of assessment was used with an attempt to triangulate the findings to increase validity	- Reported means when it would have been more useful to know median and score range (e.g. length of time working with people with LD)
Lowe *et al.*	2007	Questionnaire, observation and portfolio based study examining staff confidence, knowledge and attitudes towards their clients	n = 275 No details of statistics given	- Insufficient information to calculate	- Comprehensive - Incorporated practical elements - Participants would have been motivated due to formal qualification outcome	- No details of statistics therefore hard to examine issues such as effect size and power - Impractical to replicate given time and resource requirements for training - Participants may require a certain level of academic ability

Author	Year	Study	Sample Size & Statistics	Power and Effect size	Strengths	Weaknesses
Mansell & Beadle-Brown	2004	Paper examining policy and practice with regard to the person-centred approach	n/a	n/a	n/a	n/a
McCray & Carter	2002	Qualitative study examining service users, care workers and professionals attitudes towards training	N = 35	n/a	- Examined the views of not only care workers but also clients and professionals	- Study over 5 years old so views may still be outdated. - Sub-groups contained small numbers of people so their opinions may not be representative
McKenzie *et al.*	1999a	Questionnaire and vignette based study examining health and social care workers understanding of learning disability, duty of care and behaviour management	N = 31 Cochran's Q	- Insufficient information to calculate	- excellent levels of inter-rater reliability - examined professional health care staff's knowledge giving a wider picture	- Small staff groups within each category - What staff report they would do may not reflect what they would do *in situ*
McKenzie *et al.*	1999b	Interview based study examining staff experience and ability to define the definition of a learning disability	n = 163 Cochran's Q & Pearsons Correlation	- Not enough information to calculate for Q - Assuming an effect size of 0.6 correlation achieved power of >0.99	- 4 types of staff groups examined giving a rich and varied examination of abilities - Excellent levels of inter-rater reliability - Larger overall number of participants	- Relatively small numbers of staff within each group

Author	Year	Study	Sample Size & Statistics	Power and Effect size	Strengths	Weaknesses
McKenzie *et al.*	2000	Questionnaire and vignette based study examining knowledge of concepts of learning disability, challenging behaviour and duty of care, pre and post training	n = 59 t-test & tukey	For 'participants ability to identify learning disability criteria' - Effect size = 0.63 (med-lg) - Power >0.99	- Examined 3 concepts making it a very clinically relevant and useful paper - Looks at different types of staff giving a richer picture of knowledge - Longitudinal examination of knowledge - Used a control group	
McKenzie *et al.*	2001	Questionnaire based study examining knowledge of the concept of duty of care	n = 86 t-tests & Chi square	- Insufficient information to calculate	- Examined professional health workers knowledge giving a wider picture	- Small number of participants within groups - What staff report they will do may not reflect what they actually do in practice
McVilly	1997	Survey examining care workers opinions regarding training	n = 89 Theme analysis & focus groups	- n/a	- A large range of staff member views were elicited	- Participants were only recruited from one organisation
Sharrard	1992	Review paper examining care worker causes of stress and burnout	n/a	n/a	n/a	n/a

Author	Year	Study	Sample Size & Statistics	Power and Effect size	Strengths	Weaknesses
Smith *et al.*	1996	Survey examining care worker qualifications, access to training and attitudes towards training	n = 299 Chi square	- Insufficient info to calculate - If assume effect size 0.6 power >0.99	- Large sample size - Explored different types of service providers	- Study is over 10 years old so results may be outdated
Smith *et al.*	2002	Observation based study examining the effects of staff support pre and post active support training	n = 188 Yules Q Mann-Whittney Wilcoxen	- If assume effect size of 0.6 Mann & Whittney, Wilcoxen power >0.99.	- Examined a range of co-variants - Explicitly demonstrated terms of observation. Good for replication	- Inability to run all of the statistics due to participant characteristics - One Kappa value low and no mention made of this
Tsiantis *et al.*	2004	Questionnaire based study examining whether training can alter staff knowledge of mental health issues	n = 20 Mann-Whittney	- If assume effect size of 0.6 power 0.45.	- Used known and reliable screening tool for screening people with LD for mental health issues - Good questionnaire response rate (66%)	- Small n - Length of training means that gains hard to implement in reality - Some questionnaire responses may require attention to ensure validity

Table 1. A summary of the key papers examined during this thesis

1.3 History of the Term Learning Disability

'Learning disability' is a relatively new (Gath, 1992), socially constructed term (Russell *et al.,* 2005). The terminology used to describe this group of people has changed over time, often in response to the terms becoming stigmatising (Digby, 1996). The first formal labels applied to this client group were 'fool' and 'natural fool' (Wright & Digby, 1996). The former denoted people who were considered to have the condition as a result of developmental delay (Wright & Digby, 1996) while the latter referred to those whose difficulties were congenital (Digby, 1996). In the 15th century the terminology used was 'idiot' (Crichton, 1997) and was applied as a 'catch all' term and included people with a wide range of difficulties (Digby, 1996) that would not meet the current criteria for diagnosis of a learning disability. In 1913 'feeble-minded' and 'imbecile' were used in an attempt to further discriminate the underlying causes of 'idiocy' (Digby, 1996). All of these terms were superseded by the term 'mental sub-normality' in 1944 and subsequently 'mental handicap' (Reid, 1997). The term 'mental handicap' became stigmatising, due to the associations with both madness and physical disability (Gath, 1992, Reid, 1997) and the term 'learning disability' was exclusively adopted in the UK and recognised in policy documents in 1991 (Reid, 1997).

This process of changing terminology has parallels in other countries. The term 'mental retardation,' was used in a number of countries (World Health Organisation, 1992; American Psychiatric Association, 2000) but was also seen increasingly as stigmatising and caused individuals to experience difficulties with self-esteem (Gath,

1992; Russel *et al.,* 2005). 'Intellectual disability' is currently the term used (Schalock *et al.,* 2007) to reflect the emphasis on the associated cognitive disabilities caused by the condition (Russel *et al.,* 2005). Some researchers argue that, as with all of the previous terms, 'intellectual disability' will eventually lose favour (Russel *et al.,* 1995; Crichton, 1997).

As can be seen from the brief outline above, the term used to describe people with a learning disability has evolved with different countries using different terminology to describe the same client group (Emerson, 2001). Even within the UK, different terms are used in research, diagnostic manuals, policy documents and by people with a learning disability themselves; many of whom prefer to be referred to as having a 'learning difficulty' (Reid, 1997). These differences contribute towards confusion regarding the nature of a learning disability. This may in turn create barriers to understanding its associated cognitive difficulties and how best to provide support to minimise these. This will be examined later in more detail.

Despite differences in terminology, there is broad agreement about what constitutes a learning disability. The following section will examine the diagnostic criteria.

1.4 The Definition of Learning Disability

The diagnosis of learning disability has a significant impact on an individual's life. It determines eligibility for resources and services, the requirement for support workers and it can result in enforced intervention from others. Someone with a

learning disability would not receive the death penalty in the USA (Switzky & Greenspan, 2006). A mother with a learning disability in the UK would be expected to undertake a parenting assessment. Diagnosis should therefore be as objective, valid and reliable as possible (Meyer *et al.,* 1991). There are two main diagnostic manuals that inform this process: The International Classification of Mental and Behavioural Disorders (World Health Organisation, 1992) and the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000).

In order to receive a diagnosis of having a learning disability, an individual has to satisfy *all three* of the following criteria: a significant impairment of intellectual functioning (i.e. an Intellectual Quotient (IQ) of less than 70); a significant impairment in two or more areas of daily living and that both of these must have occurred before the age of 18 (World Health Organisation, 1992).

A key policy document in Scotland (Scottish Executive, 2000) has adopted a definition which, while based on the diagnostic criteria, uses such broad terminology that it would be difficult to determine who has a learning disability and who does not. This policy document also recommends that some people with acquired head injury or Autistic Spectrum Disorder who would not normally meet the definition of learning disability could be included in learning disability services if their difficulties would be better served by these services (The Scottish Executive, 2000). It is likely that the publication of this document has caused further confusion regarding the definition of a learning disability.

Even where there is agreement about the diagnostic criteria, differences in the way that professional groups conceptualise and report it still exist. For example, some diagnostic guidelines discuss learning disability in terms of age equivalents (Leyin, 2008) while British Psychologists are advised by their professional organisation not to do this (British Psychological Society, 2000). This indicates another potential source of confusion about what a learning disability is.

Despite this, there is some common agreement about each of the diagnostic criteria; however it is still an area where there is continued questioning regarding the measurement and application of the diagnosis. This will be examined in more detail.

First Criterion: A Reduced Intellectual Ability

IQ is considered to be normally distributed with a mean of 100 and a standard deviation of 15. A significant impairment in intellectual functioning is operationally defined as an IQ of more than two standard deviations below the mean i.e. an IQ of less than 70 (Wechsler, 1999). Intellectual functioning should be assessed by a suitably qualified individual (normally an Applied Psychologist) using an individually administered standardised assessment (British Psychological Society, 2000) such as the Wechsler Adult Intelligence Scales – Third Edition, referred to as the WAIS-III (Wechsler, 1999). There are issues and difficulties using such standardised measures. These are outlined below.

Cut-off Scores and IQ Drift

There is criticism about the arbitrary value identified for the diagnosis of a learning disability and the fact that this has remained unchanged, despite evidence that the measured intelligence levels of both the general population (Flynn, 1984) and people who have a learning disability (Kanaya *et al.,* 2003) are rising. This means that the 'norms' for intellectual assessment become invalid over time and need to be updated periodically (Kanaya *et al.,* 2003). This is only effective for a short period of time yet changes to the norms are only performed every ten to fifteen years (Kanaya *et al.,* 2003). Consequently, those who have an IQ around the cut-off point and are assessed a few years after norms are updated, may be incorrectly diagnosed (Kanaya *et al.,* 2003). It has been recommended that the performance of individuals over time should be considered in order to take this into account (Kanaya *et al.,* 2003). However this approach may result in increased scores due to practice effects (Lezak *et al.,* 2004).

There are additional concerns regarding the cut-off score. It is recognised that all assessments have some element of unreliability and this is generally addressed by providing confidence intervals for scores (Switzky & Greenspan, 2006). This can result in a debate about whether individuals should be considered to have a learning disability if the range of scores covered by the confidence intervals takes their IQ above or below 69 (Luckasson *et al.,* 1992). Some organisations and researchers consider that people with a score of less than 75 meet the diagnostic criterion for significant intellectual impairment (Luckasson *et al.,* 1992). Raising the cut off score does however, have significant implications for society. At one point the American

Association on Mental Retardation (AAMR) raised the IQ cut off to 85, resulting in an increase in the number of clients eligible for services in the USA from 6 to 32 million. This resulted in huge increases in terms of cost and resource demands (Heber, 1961). The IQ change was subsequently reversed, illustrating the influence of societal and economic factors on the concept of learning disability.

The Concept of 'g'

The difficulty of using an overall value representing general intelligence, or 'g', has also been criticised and clinicians are advised to take account of the full clinical picture when interpreting test results (Bowman *et al.,* 2002) and to examine cognitive profiles rather than the specific score (Flanagan & Kaufman, 2004). It has been suggested that the index scores provided by the WAIS-III may be a superior measure of ability compared to IQ scores (Fiorello *et al.,* 2007) as overall scores may 'average out' clinically valid and useful profiles (Luria, 1979). People with a learning disability not only constitute a very heterogeneous group, but two individuals with the same Full Scale IQ score may differ markedly in terms of their individual cognitive profiles (Murray *et al.*, 2003). The score obtained from an IQ assessment also fails to account for individual differences (Hale *et al.,* 2007).

In addition, the way that intelligence is conceptualised in intellectual assessments has been criticised. Sternberg (1985) argued for a triarchic theory of intelligence including analytical, creative and practical intelligence. Analytical intelligence involves knowledge, performance and executive functioning; creative intelligence involves adapting to unfamiliar tasks and practical intelligence involves adaptive

behaviour (Sternberg *et al.,* 2001). Sternberg (1985) argues that true intelligence can only be measured during tests of new learning and that intelligence tests can therefore only measure knowledge achievement within a specific society.

Other researchers have argued for dynamic intelligence assessment based on Vygotsky's theories of proximal and optimal development (Freeman & Miller, 2001). Here the assessments place participants under conditions where they are expected to learn and are given different types of support to achieve their full potential (Jacobson *et al.,* 2007). Torff and Gardener (1999) believe that existing intelligence tests are too narrow and argue for the concept of 'multiple intelligence'. Viable alternative measures of intelligence based on these theories have not yet been developed.

Factors Impacting on Performance on Intellectual Assessments

The outcomes of intellectual assessments are sensitive to various individual factors such as medication, substance misuse, depression, motivation and anxiety, all of which can result in the individual under-performing (British Psychological Society, 2000). Brain damage occurring later in childhood can also cause intellectual profiles to wildly fluctuate which requires careful interpretation (British Psychological Society, 2000). Some academics argue that hugely fluctuating profiles invalidate overall test results (Glutting *et al.,* 1998).

The specific testing situation can also influence outcome with factors such as interruptions, level of feedback and praise impacting on performance (McKenzie *et*

al., 2004; Meyer *et al.,* 1991). As the intelligence tests only measure static levels of intelligence (Freeman & Miller, 2001), it is important to consider individual and situational factors when interpreting the results (British Psychological Society, 2000).

Intellectual assessment is also based to a large extent on an underlying assumption that those being assessed have similar backgrounds (Jacobson *et al.,* 1997). This is despite the fact that the tests are designed for people from a specific cultural and language background (British Psychological Society, 2000). Demographic factors such as Socio Economic Status (SES) can impact differentially on performance and need to be considered when interpreting results (Georgas *et al.,* 2003). There is also an assumption that each administration of an intellectual assessment is completely standardised; however research has shown that test administration can deviate markedly from the test manual instructions and that this is relatively common within learning disability services in Scotland (McKenzie *et al.*, 2004).

Despite these limitations, intellectual assessment remains one of the key criterion in diagnosing learning disability. There has however been an increasing emphasis on using intellectual assessment in a more informative way to identify potential support needs and to identify the adaptive behaviour profile of the individual (Switzky & Greenspan, 2006). To do this Switzky and Greenspan (2006) assert that clinicians should move from using IQ as a statistical determinant of eligibility for services, to identifying what supports an individual needs in order to function effectively. Intelligence is thought to be the basis for identifying potential difficulties with

adaptive behaviour since significant impairment of cognitive ability is linked to a requirement for support in specific areas of adaptive functioning.

Second Criterion: An Impairment of Adaptive Functioning

The measurement of adaptive behaviour ability is considered increasingly to be crucial in the diagnosis of learning disability (Jacobson *et al.,* 2007), largely due to the recognition that people with the same IQ may differ markedly in their daily living skills (Hale *et al.,* 2007). Measuring adaptive behaviour adds an additional dimension to the clinical picture provided by intellectual assessment although IQ and adaptive behaviour are broadly correlated, with support needs being higher for people with lower intelligence scores (Meyer *et al.,* 1991). Some researchers point to this correlation as evidence that intelligence alone should be used to determine diagnosis of learning disability (Switzky & Greenspan, 2006).

Adaptive functioning can be defined as "relating to a person's performance in coping on a day-to-day basis with the demands of his or her environment" (British Psychological Society, 2000: 5). Typically adaptive behaviour assessments are broad (British Psychological Society, 2000) and include measurement of:

- Communication,
- Self-care e.g. washing etc,
- Social abilities,
- Being able to access services within the community,
- Having a sense of self-direction,
- Having a basic ability to keep safe,

- Academic achievements,
- Recreational activities, and
- Work/job skills (Harrison & Oakland, 2003).

A person with a learning disability would be expected to have significant difficulties in two or more of these skill areas (Emerson *et al.,* 1998) as identified by a formal standardised adaptive behaviour measure (British Psychological Society, 2000). As with assessment of intellectual functioning, there are criticisms of the conceptualisation and measurement of adaptive functioning.

The Concept of Adaptive Functioning

There is some debate about what should be included within the concept of adaptive functioning, particularly as it must be measured in relation to the cultural and societal norms of the person being assessed (British Psychological Society, 2000). Greenspan (1999) proposed a model that included competence, conceptual, social and practical IQ. In this model adaptive skills and intellectual ability overlap and practical and social intelligence reflect the adaptive behaviour criteria. The American Association for Mental Retardation split adaptive behaviour into several domains including conceptual, practical, motor, social and work areas (Jacobson *et al.,* 2007). Factor analysis of first edition assessments of adaptive behaviour highlighted a disagreement with some tests identifying three main domains and others highlighting up to ten (MacMillan *et al.,* 1993). Further research is needed to examine whether these issues have been addressed in the new measures of adaptive functioning. To combat these difficulties, the American Association for

Developmental and Intellectual Disabilities (AADID) has suggested incorporating the types and intensity of support that an individual is receiving into the diagnostic assessment (American Association for Developmental and Intellectual Disabilities, 2008).

Measures of Adaptive Functioning

The construct validity of measures of adaptive functioning can be questioned. For example, only certain elements of behaviour are examined (Switzky & Greenspan, 2006). This is particularly evident for social behaviours (Jacobson *et al.,* 2007) such as suggestibility and eagerness to please and this lack of standardisation can result in disagreement between clinicians (Switzky & Greenspan, 2006). Other researchers have criticised the inclusion of maladaptive behaviours in some scales due to the minimal correlation between adaptive and maladaptive behaviours (Harrison, 1987). There is a wide range of measures of adaptive behaviour available to the clinician but the standardisation of most measures is considered to be poorer than that of intelligence tests (Luckasson *et al.,* 1992).

Adaptive behaviour assessments are commonly questionnaires that are completed either by the client or by carers who know the client well. The knowledge of the carer can impact on the validity and reliability of the assessment (Jacobson *et al.,* 2007). Adaptive behaviour scales take considerable time to administer and it is recommended that more than one rating is obtained (Harrison & Oakland, 2003).

Individual, Situational and Cultural Factors

Adaptive behaviour is both culturally determined (Switzky & Greenspan, 2006) and situationally relevant (Jacobson *et al.,* 2007). Due to this it is important to ensure that any behaviour being measured is considered within its context. Disability and age also affect the results of an adaptive behaviour measure. Therefore these should also be taken into account during assessment (Jacobson *et al.,* 2007). Also adaptive behaviour is not static and it changes over time. Adaptive behaviour measures can also be affected by factors such as poor mental health and by behavioural difficulties (Jacobson *et al.,* 2007).

In summary, the concept of adaptive functioning can be difficult to clearly define and measure and is particularly sensitive to the culture and social context of the person being assessed. Measures of adaptive functioning are however being increasingly refined to try and address these limitations (Harrison & Oakland, 2003; Sparrow *et al.,* 1984) and they offer a fuller picture of the strengths and needs of the person with a learning disability than is provided by intellectual assessment alone. The following section will examine the final criterion for a learning disability: childhood onset.

Third Criterion: Onset of Difficulties Before Adulthood

The final criterion required for diagnosis of learning disability refers to the individual experiencing difficulties with intellectual and adaptive functioning prior to reaching adulthood (World Health Organisation, 1992) i.e. before the age of 18.

As with the previous criterion for learning disability, the concept of adulthood is socially constructed and subject to change over time. Examination of various cultures indicates widely differing points of 'coming of age' (Switzky & Greenspan, 2006). There is an ongoing debate about which is the most appropriate cut-off age. Some researchers suggest that it should be increased to 21 years (Greenspan, 1999), while The British Psychological Society (2000) suggests that the age of maturity should be lowered to reflect the critical developmental period.

Switzky and Greenspan (2006) suggest that this could be as low as seven years of age as they argue that most critical brain development has been achieved by this point in child development and that intellectual functioning therefore is unlikely to change. They also state that there is no clear age by which biological development has been completed and they argue that by the age of seventeen 'capacity' has fully developed. While these authors argue for a change in the agreed age of onset, they also acknowledge that the current definition has allowed them to 'save lives'. To clarify this statement they cite a patient prosecuted in the USA for a capitol offence. This patient sustained brain damage at the age of fourteen and was able to avoid the death penalty as a result of meeting the current diagnostic criteria (Stitzky & Greenspan, 2006: 36).

These arguments are confusing and may reflect literary disagreement regarding what is deemed to be an appropriate age of onset. It is worth noting that there is sparse literature regarding this criterion, despite its importance. Switzky and Greenspan

(2006) reflect on these difficulties and conclude that the next revision of the AAMR definition should examine this criterion further.

Until the issues related to the diagnosis have been formally addressed, they offer a new definition of learning disability

"Mental retardation refers to substantial limitations in present functioning due to very inefficient problem-solving behaviours in various domains of life experience as the result of significantly subaverage intellectual cognitive functioning (e.g. social, practical, and academic intelligences), interacting with personality and motivational variables (e.g. intrinsic motivation, mastery motivation, self-determination and self-efficacy) as compared to others the same age and cultural group" (Stitzky & Greenspan, 2006: 268).

Within this definition there is no mention of an age related criterion. Instead these authors opt to define participants using their cultural peer group as a baseline.

In summary, an examination of all of the criteria required for diagnosis of a learning disability has highlighted several problems that lead to confusion regarding the term. It is clear that the concepts involved are partially socially constructed and are therefore, subject to societal, financial and cultural influences.

The present thesis uses the following definition of a learning disability:

- A significant impairment of intellectual functioning (i.e. an IQ of less than 70)
- A significant impairment in two or more areas of daily living
- Childhood onset i.e. before age 18 (World Health Organisation, 1992)

1.5 Associated Cognitive Deficits

As a result of the deficits of intellectual functioning, people with a learning disability will often experience associated cognitive difficulties in several areas (Emerson *et al.,* 1998). While the intensity of these specific cognitive difficulties will vary from individual to individual, MacKinnon *et al.,* (2004) in their training package 'Understanding Learning Disabilities' have identified several areas likely to be effected by the presence of a learning disability. These deficits can include difficulties with attention, perception, time-perception, short-term memory, expression, comprehension and coping with change (MacKinnon *et al.,* 2004). Understanding what these concepts are and how difficulties with them may be displayed can lead to a better understanding of people with a learning disability and their behaviour (MacKinnon *et al.,* 2004). Each of the areas will be examined briefly below.

Attention

Attention can be defined as being the ability to focus the mind on an important event or a piece of information (Gross, 2005). Attention can only be given to limited information at a time (Wood *et al.,* 2006) which means that its role is to identify the most salient piece of information or activity occurring at that point in time (Gross, 2005). Difficulties with attention can also result in the individual becoming confused (MacKinnon *et al.,* 2004). People with a learning disability can experience problems with their attention which can result in confusion (Emerson *et al.,* 1998). These difficulties can be further perpetuated by problems with distractibility that can often

result in frequent task switching or tiredness (Emerson *et al.,* 1998). Carers can help by reducing the amount of distractions in the environment, by using the client's name, by looking at them while they are being spoken to and by emphasising what it is they are expected to focus on (MacKinnon *et al.,* 2004).

Perception

Information is gathered from the human senses. It is the role of perception to interpret this information in the context of experience so that it can be acted upon (Gross, 2005). A lack of sensory experience can therefore result in difficulties (Gross, 2005) including an inability to process sensory information (Powell & Jordan, 1997) or problems interpreting information received from a damaged sense or sensory network (MacKinnon *et al.,* 2004). Carers can help to manage perceptual difficulties by allowing the client to build up sensory experiences (Emerson *et al.,* 1998) and by using a multi-sensory approach to aid interpretation (MacKinnon *et al.,* 2004).

Time Perception

Time perception is a specific type of perception that can often cause problems for people with a learning disability (Owen & Wilson, 2006). Time perception can be defined as being the ability to correctly understand time and the language associated with orientating oneself in time (MacKinnon *et al.,* 2004). People who have difficulties with time perception are often unable to understand when an event is going to occur (Owen & Wilson, 2006). Individuals can also experience distress if

their schedule is altered or if they are told about an activity at an inappropriate time and either have to wait or do not have enough time to prepare (MacKinnon *et al.*, 2004). As a result of the inability to understand 'when' people can often ask about what is happening repeatedly (MacKinnon *et al.*, 2004).

People with these types of difficulties can be helped by using 'anchor' points. These regularly occurring events e.g. meal times, allow an individual to orientate themselves in time and to understand what is happening (MacKinnon *et al.*, 2004). Objects such as timetables or signs can also be used to help the individual to orientate oneself in time (Owen & Wilson, 2006). Finally, using simple language to describe time can also assist someone to understand when something is going to occur (Owen & Wilson, 2006).

Short-Term Memory

Short-term memory is a type of memory that holds recently obtained information and has a small capacity which means it can be easily overloaded (Martin *et al.*, 2007). Once information has been attended to and interpreted the brain is potentially able to remember it (Martin *et al.*, 2007). Information deteriorates quickly unless it has been rehearsed or passed to another more robust form of memory (Martin *et al.*, 2007). For the purposes of this research the term 'short-term memory' was adopted since this was thought to be the most familiar term to lay people. People with a learning disability can experience difficulties with short-term memory (MacKinnon *et al.*, 2004). They can forget information easily or can be overloaded if they are presented

with too much information at once (MacKinnon *et al.,* 2004). Forgetting information can also result in repetitive behaviour (MacKinnon *et al.,* 2004).

People who suffer from difficulties with short-term memory can be assisted by not being overloaded with information (Butler & Hope, 1995) and through the use of prompts (Powell & Jordan, 1997).

Comprehension

Comprehension is the ability to understand what another individual is communicating (Crystal & Varley, 1998). Difficulties with comprehension can manifest in the form of inappropriate speech, ignoring and repeating sentences or words (Howlin, 1997). People can become confused if they do not understand what has been communicated (MacKinnon *et al.,* 2004).

There are many strategies that can assist an individual with comprehension difficulties. These include slowing down the speed of speech (Emerson *et al.,* 1998) to give them additional processing time (MacKinnon *et al.,* 2004) and using short, simple language (Emerson *et al.,* 1998). Repeating what has been said (MacKinnon *et al.,* 2004) when required will also give the person the opportunity to understand what is being communicated. Jargon and difficult or abstract terms should be avoided (Emerson *et al.,* 1998) because these are particularly difficult for people with a learning disability. Alternative communication methods can also help to convey information to a person with a learning disability (Emerson *et al.,* 1998).

Expression

Expression is the ability to communicate with another person in order to convey information such as what is wanted or what the individual has been doing (Lezak *et al.,* 2004). Expression has many forms and it is not limited to the verbal domain. It can include methods such as body language, signing and behaviour (Lezak *et al.,* 2004). Difficulties with expression can be manifested in the form of others experiencing problems understanding what the client is saying (McKinnon *et al.,* 2004). If people are unable to express themselves then they might experience a loss of independence and frustration or difficulties in relating to others (MacKinnon *et al.,* 2004). Methods of helping someone to overcome difficulties with expression, include staff being familiar with each client's individualised communication methods (Howlin, 1997), knowing about their clients interests (MacKinnon *et al.,* 2004) and encouraging their client to use identified communication methods (Howlin, 1997).

The aim of the training package developed by MacKinnon *et al* (2004) is to help staff understand the cognitive difficulties that people with a learning disability experience and to suggest strategies to assist clients with these difficulties. The following section will look at the role of training within the policy context.

1.6 The Policy Context

Over time, the type of service offering care and support to individuals with learning disabilities has changed. This change has mirrored a shift in policy outlined by the

Government in the NHS and Community Care (1990) Act. With this transition, the emphasis has shifted from care provided by qualified health care professionals such as nurses, to paid members of the public who may not possess any formal qualifications. The training that health workers require in order to be employed by the NHS differs vastly from the informal training that care staff receive (McKenzie *et al.,* 1999a). It must be noted that some care workers receive no training at all before they begin to directly work with individuals with a learning disability (McKenzie *et al.,* 1999a). Despite the shift in the type of worker supporting people with learning disabilities, documents providing advice and recommendations regarding best practice have continued to emphasise the continuing importance of staff training (Scottish Executive, 2000; Scottish Executive, 2005).

In 2000 the Scottish Executive published the document the 'Same as You?' This document highlighted that the optimal standard of care could only be provided by support staff with an appropriate understanding of the types of difficulties that people with learning disabilities encounter. It emphasised that staff should be well trained and experienced. The White Paper entitled 'Valuing People: a New Strategy for Learning Disability for the 21st Century' (Department of Health, 2001) also emphasised the importance of staff training and specifically noted that well trained carers are vital to the provision of good quality services.

Likewise, the 'National Care Standards' identified by the Scottish Commission for Regulation of Care (Scottish Executive, 2005) highlight that all staff should be appropriately trained and should have the relevant skills and experience to be able to

carry out their duties. It also states that well trained staff are a vital component in the supply of high quality services and has therefore recommended that all organisations have a clear policy outlining the provision of staff training, with staff training plans being reviewed and updated annually.

It is also thought that a lack of staff training can have direct links to clients displaying behaviours such as challenging behaviour (Royal College of Psychiatrists *et al.,* 2007). It is argued that a lack of staff awareness can lead to the client's ability being incorrectly estimated resulting in inappropriate levels of support (Royal College of Psychiatrists *et al.,* 2007).

It can be seen that a range of policy documents have identified that training is not only important for helping staff to understand the concept of learning disability but that it also helps the worker to appropriately support their clients. Providing appropriate support is closely linked to writing person centred plans and implementing active support. A brief outline of person centred planning and active support will be given, before examining the impact of staff training on knowledge and practice.

Training and Person Centred Planning

As was noted, it has been widely argued that meeting the individual needs of a client is linked to the training and knowledge of staff (Holburn & Vietze, 2002). Person-centred planning originated in 1979 and is a method designed to help the service

meet the client's needs through a thorough understanding of his or her wishes, needs and individual and environmental circumstances (Holburn & Vietze, 2002).

It is recommended that a person-centred plan should only be developed within a "community of practice", which is an organisational culture whereby staff have both expert knowledge and are highly competent with their client group (Holburn & Vietze, 2002). Expert knowledge of a client group cannot be obtained until a minimum understanding of the client's difficulties and the types of support they require is understood (Holburn & Vietze, 2002). It is assumed that having an understanding of the concept of learning disability and its associated cognitive difficulties is a basic requirement for understanding which types of support should be given to people with learning disabilities and that training will allow carers to achieve this level of knowledge (Scottish Executive, 2005).

Training and Active Support

Active support is one approach where staff encourage their clients to engage in appropriate types of activities through promotion of 'normal living' (Kings Fund 1980, in Totsika *et al.,* 2008), with an emphasis placed on increasing the quality of interactions and support in order to promote engagement in activities (Smith *et al.,* 2002). While there are different active support models, staff have to be specifically trained in methods of delivering this approach (Jones *et al.,* 1999). Research has demonstrated that active support impacts positively on practice as a direct result of staff increasing their ability to engage appropriately and provide suitable activities (Smith *et al.,* 2002).

It can be seen that a number of policy documents emphasise that services should have both a strong value and knowledge base (Fraser *et al.,* 1998). The values should emphasise that the client has the same rights as members of the population who do not have a learning disability and appropriately trained carers should have the knowledge base to allow them to provide an individualised, needs focused service (Fraser *et al.,* 1998). Person centred planning (Sweeny & Sanderson, 2002) and active support (Stancliffe *et al.,* 2008) are both value based approaches that require the staff to have a clear understanding about the individual needs and strengths of the clients that they support. Research suggests that staff lack a basic knowledge of the concept of a learning disability and the associated difficulties which clients may have. The following section will provide a brief overview of staff training and the impact this has had on staff knowledge and practice.

Staff Training: The Impact on Knowledge and Practice

A number of authors have highlighted the importance of having a fundamental knowledge of the concept of a learning disability and its associated difficulties (Fraser *et al.,* 1998, McKenzie *et al.* 2002). Research has indicated both that levels of knowledge in this area are relatively low (Barr, 1995) and that those who are more likely to need training are less likely to view it as relevant or to pursue it (Smith *et al.,* 1996).

Smith *et al.,* (1996) conducted a survey of 299 care workers and examined their qualifications, access to training and attitudes towards training. This study illustrated

that a small number, of mostly managerial staff, held a professional care related qualification and only a small proportion of workers had received any induction training prior to working with clients. Most carers had been able to access at least one 'in house' training course over the previous five years; however those who had not received any training were less likely to identify training as a need. Only a small percentage of staff identified the need for training around the concept of learning disability (Smith *et al.,* 1996). This observation was consistent with previous research conducted by Allen *et al.,* (1990). The study by Smith *et al.,* (1996) had a large sample (n = 299) and examined a range of different types of service providers; however the research was limited to only one Health Board area. It is also important to note that this study is eleven years old and attitudes towards training have since changed (McVilly, 1997; McCray & Carter, 2002).

McVilly (1997) also examined care staff opinions regarding training and discovered that staff believed that their knowledge and skills were dependent on the quality of training. This survey indicated that care staff generally believed that all training that influences their direct work with clients is important. However, they particularly valued training examining challenging behaviour, facilitating client choice, teaching financial skills and manual handling (McVilly, 1997). In this study, staff reported that insufficient training was a major factor that would influence any decision to leave the organisation (McVilly, 1997); which illustrates the importance that these staff members placed on training. This study only used staff from one care organisation; therefore it is possible that these opinions are not reflective of general

staff opinions. It is 10 years old so it is also possible that these opinions have changed over time.

A more recent qualitative study (McCray & Carter, 2002) examined the value that clients, care workers and professionals place on training and identified that workers believe that training is important and required. Specifically competencies regarding assessment, communication strategies, working with challenging behaviour and working with people with severe, profound and multiple disabilities were seen as being vital to working effectively.

A lack of appropriate training has been discovered to influence levels of work related stress (Bersani & Heifelz, 1985). Research has reported that staff training is not only beneficial for reducing high levels of stress (Bersani & Heifelz, 1985) but also allows workers to provide support for the client and their difficulties. This in turn may also reduce the chances of clients displaying challenging behaviour by altering how staff view and react to the behaviour (Hastings, 1995).

In summary, training is viewed as important by a range of people working within the field of learning disabilities (Scottish Executive, 2005; Department of Health, 2001; McVilly, 1997; McCray & Carter, 2002). There is also an emphasis on the importance of understanding the concept of a learning disability as a basis for further training (Hastings, 1995; Bersani & Heifelz, 1985). A number of researchers have examined staff knowledge about the concept of learning disability.

Staff Knowledge About the Concept of Learning Disability

McKenzie *et al.,* (1999b) examined staff knowledge of the concept of learning disability across four groups (residential care staff, day service care staff, NHS staff and General Practitioners) and whether they could identify the three criteria required for a diagnosis of learning disability. The results of this study highlighted that different types of staff were more likely to be able to identify some of the criteria than others. Specifically, General Practitioners were most likely to be able to identify the requirement for the client to experience significant problems in their intellectual ability. Overall, NHS staff were most likely to be able to identify all of the criteria whereas residential care staff were least likely to be able to do this. Staff performance indicated that people were more likely to be able to identify the IQ component than the adaptive component and that they were more likely to be able to identify the adaptive component than the age requirement.

For this research (McKenzie *et al.,* 1999b), the authors surveyed a large number of staff and excellent levels of inter-relater reliability were obtained. Unlike some of the earlier studies, participants were taken from several care staff organisations rather than all participants being recruited from one agency. It is, therefore, likely that the results of this study can be examined and generalised with more confidence. This study highlights concerns that a lack of basic knowledge regarding the concept of a learning disability results in staff failing to identify common difficulties. This has implications for the quality of support being provided.

McKenzie *et al.,* (1999a) looked at the ability of health and social care staff to identify the criteria required for diagnosis of a learning disability, issues arising as a result of duty of care and understanding of the causes of challenging behaviour and its management. On a daily basis care staff routinely make decisions about required levels of support and whether the client can do a task themselves or whether, as care staff, they have a 'duty of care' to intervene (McKay, 1991). Duty of care refers to staff being aware of their obligation to keep their client safe (McKenzie *at al.,* 2001). This decision making process requires a basic understanding of the difficulties associated with having a learning disability (McKenzie *et al.,* 1999a) and involves the care worker weighing up their knowledge of the client's abilities and intervening when the client's actions could potentially cause harm. The client should be allowed opportunities to take risks in order to learn (McKay, 1991). However, it is recognised that the more severe the learning disability, the more likely it is that staff will be required to exercise their duty of care (McKay, 1991).

McKenzie *et al.* (1999a) illustrated poor levels of knowledge among staff regarding the criteria required for diagnosis of a learning disability and the factors involved in making decisions about duty of care. These results were consistent with those of other studies (Lyall *et al.,* 1995; Brown *et al.*, 1994).

Training has been developed specifically for carers of people with learning disabilities, which can provide a formal qualification, such as a National Vocational Qualification (Qualifications and Curriculum Authority, 7th May 2008). For many staff however, the only training provided is 'in house' programmes (Smith *et al.,*

1996). Depending on the type and quality of training offered to staff members, it can be expensive both in terms of money (Ziarnik & Bernstein, 1982) and time, which is of particular importance for organisations who experience a high degree of staff turnover (Allen *et al.,* 1990). The training may also prove to be ineffective and may not serve to improve the quality of care for clients (Ziarnik & Bernstein, 1982). Due to this, analysis of the effectiveness of training is important.

The Impact of Training on Staff Knowledge and Practice

McKenzie *et al.,* (2000) examined the knowledge of health and social care staff regarding the concepts of learning disability, challenging behaviour and duty of care both pre and post training. The post training knowledge was measured under three conditions; immediately after training, three – six months after training and one year after training. Knowledge was measured using questionnaires and vignettes (McKenzie *et al.,* 2000). Generally it was noted that after training, staff knowledge of the concepts of learning disability, challenging behaviour and duty of care improved. Knowledge of the concept of challenging behaviour however, did not improve. These increases in knowledge were maintained by participants up to one year after attending training (McKenzie *et al.,* 2000). This study made a powerful contribution to the argument for the provision of staff training due to its beneficial effect on staff knowledge. The longitudinal nature of this study appeared to provide a new perspective on the effectiveness of training.

McKenzie *et al.,* (2000) looked specifically at the impact of training on staff knowledge of learning disability. Other researchers who have evaluated the impact

of training also focused on knowledge rather than changes in practice (Tsiantis *et al.*, 2004; Campbell, 2007).

Tsiantis *et al.*, (2004) examined staff knowledge of mental health needs and demonstrated that training was able to increase staff knowledge of related matters; however staff struggled to implement this knowledge. This study had a low number of participants (n = 20). It is wondered whether the low number of participants arose from known difficulties associated with staff training including freeing up staff to attend (Allen *et al.*, 1990) and its financial implications (Ziarnik & Bernstein, 1982). Due to these factors, asking staff to attend a two-day training course may be impractical for some organisations. Some aspects of the study by Tsiantis *et al.*, (2004) warranted further consideration. One of the areas worth exploring further would be to include an assessment of whether reported attitudes impact on practice. Some of the results require careful interpretation due to small numbers. For example, the authors state that nineteen percent of participants struggled to implement practice suggestions when in reality this reflected responses from only two participants.

Kalsy *et al.*, (2006) were able to increase worker knowledge regarding Down Syndrome and Dementia using a training package. Ninety-seven participants providing day services for people with learning disabilities took part. Participant knowledge, attributions and levels of optimism were measured before and after a training session focusing on dementia and learning disabilities. This was measured using a mixture of questionnaires and vignettes. Knowledge regarding ageing and

learning disabilities was noted to significantly increase post training. This training significantly altered staff opinion regarding their ability to reduce dementia related behaviours. No significant differences were noted after the training regarding participant optimism. This study did not examine the effects of training on practice and did not measure whether these benefits were maintained over time. The design did not incorporate a control group to assess for knowledge change as a result of other variables. Despite these criticisms, a range of assessments were used in order to attempt to cross-reference findings and to add validity to the results.

Other research has highlighted that some teaching fails to translate into practice. Harding & Halai (2009) provided carers working with people with dysphagia (swallowing difficulties) with training demonstrating how to mix fluids to an appropriate consistency. This is an essential care component for many clients with severe and profound learning disabilities due to links between dysphagia and life threatening conditions such as chest infections or choking. Mixing fluids to an appropriate consistency is linked to a reduction of these risks. This study illustrated that despite being provided with dysphagia training and regular opportunities to implement this training, carers reported that they still struggled to appropriately mix fluids.

When examining studies using vignettes as part of their methodology, such as the one conducted by McKenzie *et al.,* (2000), it was wondered whether participants' theoretical responses actually reflected real-life decisions.

There have been conflicting studies regarding methodological issues associated with vignettes. Some researchers have noted that participants overestimate their responses (Sandvik, 1995) or report significantly more positive beliefs than when presented with real life scenarios (Lucas *et al.,* 2009). Other research (Mason & Scoir, 2004) has criticised vignettes due to their simplicity. Taylor (2006) recommends the use of several vignettes to understand a 'typical' response, however the 'optimal' number required to do this remains unclear. Other research identifies vignettes as being a valid method of studying practice (Shah *et al.,* 2007; Hughes & Huby, 2002) and indicates that they are able to accurately measure performance (Peabody *et al.,* 2000). Vignettes remain a frequently used method of examining practice and they allow for decision-making processes to be documented, particularly where real life examination is difficult (Taylor, 2006).

A number of studies have demonstrated that staff training in a variety of areas can increase knowledge; the impact on practice either has not been evaluated or has been limited. Despite these criticisms, some gains have been demonstrated and these will be considered in the next section.

The Link Between Staff Knowledge and Level of Service Provision

Despite the assumption that staff training will result in better support for people with a learning disability, there has been limited research which has examined either the impact of training on staff practice or the impact of staff knowledge on practice.

Clients vary in the extent to which they need support (British Psychological Society, 2000; Luckasson *et al.*, 2002). Depending on their level of ability they will require occasional or permanent support with varying levels of staffing and input (Luckasson *et al.*, 2002). The greater the level of support need (Forster & Iacono, 2008), the more support and staffing is required.

Research, has, however, demonstrated that people with more severe levels of learning disability tend to receive *less* support (Grant & Moores, 1977) and interaction (Felce & Perry, 1995), even though the move to community care provided better staff-to-client ratios (Felce & Repp, 1992). Despite these mediating variables it has been demonstrated that providing staff training in active support can lead to improved levels of support (Jones *et al.,* 1999).

Active support is a method of working where staff encourage their clients to engage in appropriate types of activities (Totsika *et al.,* 2008) and such approaches have been recommended by the Department of Health (2009). Active support is evidenced to help staff provide clients with contextually valid (McClean *et al.,* 2005) and appropriate levels of support (Bradshaw *et al.,* 2004). It has also been demonstrated that training regarding the use of active support (Jones *et al.,* 1999) has increased the amount of *appropriate* input for clients.

Jones *et al.,* (1999) examined five projects managed by the same organisation. All of these projects provided services for adults with moderate levels of learning disabilities. Adaptive behaviour measurements were taken on all residents and staff

were provided with a two-day training package about active support as well as input from one of the trainers on how to implement this with their clients. Staff observations were conducted at regular intervals over twelve months. After the training, residents spent more time engaged in meaningful activity. Social engagement levels however did not alter. Overall residents received more assistance from staff following the study. During follow-up measurement staff were noted to maintain their engagement in domestic activities. However the overall activity levels returned to their pre-intervention levels. It was suggested that these results may have been influenced by a staff change in one of the participating houses. This longitudinal study factored out the pre-intervention support through the use of regression. The researchers used observers to gather data. Kappa was used to assess observer reliability and inter-rater reliability was noted to be within acceptable limits with the exception of one kappa score which was noted to be 'fair'. It is therefore possible that this set of observations would be less reliable and these results should thus be considered tentatively. Overall, this study provided a valuable insight into the role of active support in working with people with learning disabilities.

The relationship between training and changes in practice is not however, straightforward. Staff are reported to experience more difficulties when engaging with clients with severe levels of learning disabilities, even when using active support (Mansell *et al.,* 2003) and as a result this client group in particular may not receive appropriate input. Research has also highlighted several mediating factors linked to staff provision of support. Factors such as staff attitude and confidence levels can alter the quality of client support.

Lowe *et al.,* (2007) provided 275 staff members with training on positive behavioural support (80 hours of formal instruction and over 30 hours of personal study) over a twelve-month period. Participants were observed, submitted a portfolio in order to demonstrate their learning and had their knowledge, attitudes and confidence measured. This study highlighted gains in staff confidence and knowledge. Positive attribution change was noted immediately after the training but it returned to baseline levels when measured at follow up. Anecdotally, Managers reported positive changes in worker behaviour, however, this needed to be evidenced using formal measures. The intervention used a comprehensive training package that was supported with practical assessment of change. It must be noted however, that this level of intensive training could be impractical given the length of personal and organisational time required for certification. Details of staff turnover were not given, therefore it is difficult to establish whether it had any effect. The shift in the type of care provided has resulted in a change from qualified carers to people who may lack formal qualifications. As a result, participant aptitude could have been problematic given the requirement to complete a portfolio. It is possible that participants may have struggled with the academic elements of this prerequisite.

Historically, research has highlighted practice-moderating variables such as staff being more likely to interact with clients of the same sex (Hargrieves, 1969) and being less likely to interact with clients who display challenging behaviour (Hewson & Walker, 1992; Repp *et al.,* 1987). Staff personality has also been demonstrated to influence practice. Workers have been identified to interact more with clients that

they like, and as a result, a smaller number of clients received a higher level of interaction (Moores and Grant, 1976). Finally, staffing ratio can also alter staff practice. Optimal staffing levels involve one member of staff with only a small number of clients (Mansell *et al.,* 1982), however, research has highlighted that if two or more staff are allocated to a group of clients then they are more likely to interact with each other rather than the clients (Kandler *et al.,* 1952). Staff interaction with one another can be reduced if each staff member is allocated a specific role (Dalgleish & Matthews, 1981). It could be argued that being aware of these factors could result in a change in practice with an effort being made by staff to break these trends (Felce *at al.,* 1991). Further research would be invaluable into investigating these factors further.

1.7 Summary

Defining a learning disability is not straightforward. The terminology has changed over time and differs between countries. While there is broad agreement about the three diagnostic criteria for a learning disability, there is considerable criticism of the underlying concepts. Their measurement is fraught with difficulties. Political and social trends influence the concept of the definition and its measurement. Despite this, policy documents and researchers alike have emphasised the importance of understanding what constitutes a learning disability. The role of training has been identified in improving knowledge and practice in order to provide a good quality, individualised service that meets clients' needs. Given the debate around the concept of a learning disability, research has demonstrated that staff have limited knowledge

about current trends in definition and its influence on their role. Research on active support indicates that providing training in this area leads to improvement in staff practice but that the relationship between training, knowledge and practice can be mediated by a number of factors.

Given the research base indicating a lack of staff understanding of the concept of a learning disability and its associated difficulties, this thesis examines the impact of providing care staff with a standardised training package focusing on the concept of learning disabilities and its associated cognitive difficulties (MacKinnon *et al.,* 2004). The training covered the criteria required for diagnosis of a learning disability and focused on key cognitive difficulties experienced by this client group including attention, perception, time-perception, short-term memory, expression and comprehension (MacKinnon *et al.,* 2004). Each concept is explored in terms of the difficulties experienced by individuals with deficits in these areas and helpful techniques that could be used when working with clients with these types of difficulties (MacKinnon *et al.,* 2004). This study examined the impact of this training on participants' concept of a learning disability, its associated deficits and strategies used to help people with these deficits.

Attending training has been demonstrated to result in knowledge improvement (McKenzie *et al.,* 2000; Tsiantis *et al.,* 2001; Kalsy *et al.,* 2006), however there is less evidence to demonstrate its effects on practice. Qualitative interviews were conducted to examine the clinical utility of this training and to explore participants' perceptions of it and any issues occurring as a result of attending.

1.8 Aims and Hypotheses

The aim of the current thesis is to examine the impact of a one day training course (MacKinnon *et al.,* 2004) on care staff knowledge of the concept of learning disability and its associated cognitive deficits.

This study will examine the following hypotheses:

1. There will be a significant increase post training in participants' ability to identify the criteria for diagnosing a learning disability.

2. There will be a significant increase post training in participants' ability to define the concepts of attention, perception, time-perception, short-term memory, comprehension and expression.

3. There will be a significant increase post training in participants' ability to state how difficulties with the above concepts might impact on day-to-day functioning.

4. There will be a significant increase post training in participants' ability to give examples of how they would help someone compensate for the above cognitive difficulties.

5. Any post training gains in the above knowledge areas will be retained one month after training.

This study is divided into two parts. The method, results and discussion will be considered in terms of each part followed by a chapter linking the study.

Chapter 2. Part One – Method

2.1 Design

This is a quantitative questionnaire based study examining participants' knowledge pre and post intervention. The independent variable is the training package delivered to each participant and the dependent variable is the scores obtained from the questionnaires.

2.2 NHS Ethical Procedures and Approval

An application was submitted to the local NHS Research Ethics Committee and was approved on the 25th October 2006 (Appendix 1). As per protocol, an application was then tendered to the local Research and Development committee to request permission to begin the study. Permission was given for the study to proceed on the 13th January 2007 (Appendix 2).

2.3 Power and Sample Size Calculations

Cohen's Kappa was used to assess levels of inter-rater reliability. Due to a lack of power tables available specifically for Cohen's Kappa, a Pearson's Correlation power table was consulted and used as a guide for selecting the appropriate number

of questionnaires required for analysis. An alpha level of 0.5 was used along with a power of 0.8 to determine that a minimum of 25 participants should be used to analyse inter-rater reliability (Clark-Carter, 2004). This calculation also applied to the partial correlation.

A power analysis was carried out to determine the number of participants required for analysis at each point of measurement. Power was again set at 0.8 and alpha level at 0.05. A review of previous literature highlighted a study by McKenzie *et al.* (2000) examining the impact of training on staff knowledge of learning disability. This study specifically examined participants' ability to define the diagnostic criteria which relates to Hypothesis 1. No study could be found which examined pre and post training knowledge of the concepts of learning disability examined within this project. The McKenzie *et al.* (2000) study was the most similar to the current project; therefore the results from this study have been used in the power calculations for all of the hypotheses.

The McKenzie *et al.,* (2000) study had a large effect size (d = 0.97) but the differences between the current study and McKenzie *et al's,* (2000) study suggest that basing an effect size on the McKenzie *et* al., (2000) would be unduly optimistic. Due to this a medium to large effect size (0.5 – 0.8) was predicted. A within-subjects t-test power table was consulted to determine how many participants would be required in each group (pre training, post training and delay training), with a power of 0.8 and an alpha level of 0.05. This highlighted that data from 20 participants in this repeated measures design would be required at each stage (Clark-Carter, 2004).

2.4 Participants

Inclusion and Exclusion Criteria

Care staff who work with adults with a learning disability within the geographical areas covered by the research were eligible to attend training. Participants were included in the study if they attended training, agreed to participate on the consent form and submitted part one and two questionnaires.

Participants were excluded if they did not submit both questionnaires given to them on the training day or if they had previously attended a course examining the concept of learning disabilities ran by the Department of Clinical Psychology.

Recruitment

Participants were recruited using letters of invitations and posters. Letters of invitation containing posters were given to local Social Work managers and were distributed to all service providers within the study area. Social work handled the distribution of the invitations because it was possible that the Clinical Psychology Department was not aware of all the organisations operating within its clinical area.

On the invites and posters advertising the training and during the training session, participants were reminded that the training was being used as part of a research project. On the training day each participant had an option to participate in the study.

Each participant was presented with a consent form that they were asked to read and sign. On the consent form participants were requested to indicate whether or not they wished to participate in the project.

Two participants chose to withdraw from the study. The first chose to withdraw, as indicated by their preference on the consent form. The latter chose not to submit a part two questionnaire during the training day.

2.5 Procedures

All care providers offering services to adults with learning disabilities within a clinical area in Scotland were sent a letter and a poster inviting their staff to attend a free training day examining the concept of learning disability. The letters detailed the content of the training and highlighted that the training was being offered as part of a Trainee Clinical Psychologist's final year research project. Staff were informed that they would be asked to fill out a total of three questionnaires as part of the project and attend the free training day. The letter highlighted that those requesting to attend the training would be considered to be entered into the research project; however participants were clearly informed that they could withdraw at any point. A copy of the letter and poster are included in Appendices 3 and 4 respectively.

Initially 10 training days were offered and a total of 70 staff requested to attend, however only 44 staff actually attended the training sessions. As a result of this a further 6 training days were allocated and a request was made to the Local Ethics

Committee to extend the project to an additional clinical area in Scotland to maximise attendance. This request was granted and as a result a further 63 staff members requested places and 42 attended.

Participants who were recruited into the study were requested to attend one six-hour long training session. Upon arriving at the training, participants were asked to read and sign a consent form and to fill out a pre training questionnaire (Questionnaire 1). A copy of the consent form and questionnaire one can be found in Appendices Five and Six respectively.

Questionnaire 2 (Appendix 7) was given to each participant twice during the study; once at the end of the training day to measure immediate knowledge gains and then one month later to measure each participant's retention of knowledge. The delayed response questionnaire was sent to each participant along with their certificate of attendance. A copy of the certificate of attendance can be found in Appendix 8. Each participant was sent a stamped addressed envelope to ensure that they did not incur any costs either organisationally or personally for returning their questionnaire.

2.6 Training Package

The training package "Understanding Learning Disabilities" (MacKinnon *et al., 2004*) was chosen due to the fact that it examined the subject matter being considered during this research. Using a published package ensured that a standardised approach was adopted for each training session.

The MacKinnon *et al.,* (2004) training package comprises of a comprehensive examination of the definition of learning disability and its associated cognitive difficulties which include; attention, perception, time-perception, short-term memory, expression, comprehension and coping with change.

A variety of teaching methods were used to deliver the training, including lectures, video, discussion in large and small groups and practical exercises. Participant use of anonymous case examples was encouraged and the researcher also enriched the formal teaching with anonymous case examples from her own clinical experience.

2.7 Ethical Considerations

Consideration was given to the issue of maintaining confidentiality and responding to carers whose clients required a referral to the service or to carers that reported using punitive practice.

Time was taken at the beginning of the training package to request that all identifying details were removed from any case examples and participants were told that if this was not possible, they should select another example. Reminders could be given, if required, to ensure that all participants maintained appropriate levels of confidentiality.

Any staff members who raised case examples regarding clients with complex difficulties, such as additional mental health problems, or with whom they were struggling to support, were advised to initiate a referral to the Community Learning Disability Team. This would ensure that the researcher acted within her duty of care, to ensure that such situations were appropriately addressed by the relevant professional.

It was also decided that should any examples of derogatory or punitive practice or opinions be given then *if appropriate* these would be discussed within the group to elicit alternative methods of working. These situations would also be reported to the area Clinical Psychologist so that they could contact the worker to discuss this issue further.

2.8 Measures

Two specifically designed questionnaires (Questionnaires 1 and 2) were used to collect the information required during this study. The research questions on each questionnaire were identical. Questionnaire 1 contained additional questions relating to the demographical details of each participant. Each participant was asked to give their name, gender and employing organisation. Respondents were also asked to indicate how long they had been working with people with learning disabilities. Questionnaire 2 was completed at the end of the training day and again after a one-month delay.

Participants were asked to write their name on each questionnaire to ensure that all of their data could be correctly linked together.

Questionnaire Design

The questions included in the questionnaires were formed after examining the content of the teaching package (MacKinnon *et al.,* 2004).

Initially, participants were asked to identify the three criteria required in order to receive a diagnosis of learning disability. All of the other concepts were then examined using three types of questions. The initial question asked each participant to define the concept e.g. attention. Then each participant was asked what types of difficulties their clients would experience if they had a problem with this cognitive component. Finally, each participant was asked to give examples of techniques that they could use to minimise any difficulties experienced by the client in the target area. These types of questions were designed to be consistent with the format used by the training package. Each participant's knowledge of the concepts of attention, perception, time-perception, short-term memory, expression and comprehension was measured using this style of questioning.

All questions were open-ended which meant that the participants were required to formulate and write their own answer. This meant that each participant was not primed to respond correctly and that recognition of answers was not contaminating responses (Breakwell *et al.,* 2006).

A scoring protocol was devised on the basis of a thorough literature review and consultation with a panel of experienced Learning Disability Clinical Psychologists. The test-retest reliability of the scoring system was examined by comparing the researcher's scoring with scoring conducted by a qualified Clinical Psychologist. All questionnaires were then scored using the scoring protocol.

Scoring Protocol Design

The concepts of the definition of a learning disability, attention, perception, time-perception, short-term memory, expression and comprehension were examined. Coping with change was not examined as part of the thesis project due to this concept, its associated difficulties and strategies being too generic. As a result of the generalised nature of this topic, many of the difficulties detailed by the package could be easily attributed to other variables and not exclusively to difficulties with coping with change. The same criticism could also be applied to the strategies identified by this package to help clients adapt to difficulties with coping with change. On the basis of a thorough literature review of the topics covered during the training the researcher also believed that it was not advisable to examine the area of coping with change due to a lack of evidence base for some of the information disseminated when considering this topic.

The scoring system was devised based upon the main topics covered by the training package and a thorough literature search into the types of cognitive difficulties experienced by people with learning disabilities. A definition was identified and associated problems were highlighted. Finally, evidence based strategies designed to

minimise these difficulties were then examined during the literature review. A scoring system was written based on these factors.

The scoring system was then given to a panel of experienced Clinical Psychologists working exclusively within the Learning Disability field for their opinion.

The panel of experts consisted of three learning disability Consultant Psychologists working within the field of learning disabilities. Each Psychologist was presented with the scoring system and was invited to give their opinion. Generally the feedback indicated a positive response to the scoring system; however the following suggestions were generated by the expert panel.

1. In relation to difficulties associated with attention, distraction and concentration, it was felt that the three terms were likely to be seen as similar to lay people and that their answers would reflect these similarities. It was recommended that these two scoring criteria (within attention) should be merged.
2. It was thought that perception is a difficult concept for non-Psychologists to understand. It was recommended that specific examples of correct answers be provided so that the scorers could determine what would constitute a correct answer.
3. It was thought that some of the scoring themes overlapped. It was suggested that correct answers for any overlapping concepts were clearly identified in

the scoring criteria to help remove any confusion regarding appropriate answers.

4. It was recommended that all examples of correct answers were clear as to why they scored a point. It was further suggested that providing examples of incorrect examples would help the scorer determine the difference between what constitutes a correct and incorrect answer.

On the basis of these suggestions, the final version of the scoring system was devised. All suggestions, apart from the last suggestion, were adopted. Incorrect answers were not incorporated into the scoring system to ensure that the scorer was not confused or overwhelmed with information. An examination of returned questionnaires indicated that wrong answers were clearly rather than subtly incorrect. A copy of the scoring protocol can be found in Appendix 9.

Inter-rater reliability

A random selection of data was selected, made anonymous and copied for inter-rater reliability analysis. The principle researcher scored one copy while the other was scored by a qualified Clinical Psychologist working within the Learning Disability Department. Inter-rater reliability for each question was then examined.

2.9 Statistical Analysis

The scores obtained for each participant for the definition of a learning disability were explored and examined. The scores obtained for each participant's ability to define the areas of attention, perception, time-perception, short-term memory and comprehension and expression were added together to give an overall cognitive definition domain score. Each participant's scores for their ability to identify difficulties associated with the areas of attention, perception, time-perception, short-term memory and comprehension and expression were added together to give an overall difficulties domain score. Finally, the scores obtained for each participant's ability to identify strategies that could be used for difficulties with the areas of attention, perception, time-perception, short-term memory and comprehension and expression were added together to produce an overall strategies domain score. This meant that the pre, post and delayed scores for definition, difficulties and strategies domains could be analysed.

Combining area scores into domain scores minimised any potential difficulties (i.e. a ceiling effect) caused by a small scoring range. This also reduced the amount of statistical tests required, thus eliminating the difficulties associated with conducting multiple tests.

Examination of the distribution of the data was performed for each domain (what is a learning disability and cognitive definitions, difficulties and strategies). Outliers were identified and removed. The data were examined to see whether it was

normally distributed and it was considered to have an abnormal distribution if either the skew or kurtosis value was more than twice standard deviation for the skew or kurtosis value (Shiken, 2008).

Both parametric (paired-sample t-test) and non-parametric (McNemar & Wilcoxon Signed ranks test) tests were used during this thesis. All relevant participants were included in analyses. The results of these tests are detailed in Chapter 3.

Covariates were also examined using partial correlation. In order to conduct the McNemar test, the scores needed to be recoded. All scores of 0 were coded as 0 and all scores of 1-3 were coded as 1. This allowed the data to be collapsed into a 2x2 matrix so that the statistical test could be performed. The results of these tests are reported in Chapter 3.

Chapter 3. Part One – Results

3.1 Data Analysis

All data analysis for this thesis was conducted using the Statistical Package for the Social Sciences (SPSS) version fifteen (SPSS Inc., 2006).

3.2 Statistical Power

A total of 84 'questionnaire 1' and 'questionnaire 2 – immediate responses' (a response rate of 98%) and total of 33 'questionnaire 2 – delayed responses' (a response rate of 39%) were submitted. In all cases this number exceeded 20 which was the minimum number of questionnaires required to achieve power for the study. This means that sufficient power was achieved for the results of the questionnaires.

3.3 Statistical Analysis

Parametric and non-parametric tests were used to analyse data. Where data did not exceed limits for skew or kurtosis, a paired-sample t-test was used. A repeated measures ANOVA was not selected due to the substantial drop in the number of participants at the third time point.

Where data exceeded limits for skew or kurtosis, a Wilcoxon Paired Sample test was used. A Friedman test was not selected, again due to the substantial drop in participants at the delayed measurement, which would have resulted in this test only examining the data from these participants. Due to the small range (0 – 2) for the 'what is a learning disability' component, the data were regarded as categorical and a McNemar test was conducted.

As a result of repeating tests, the issue of potential type 1 errors arose. A Bonferroni correction was not performed. A Bonferroni correction would have resulted in the significance level being changed to 0.0167; all of the significance levels obtained during this study were less than 0.01 and therefore this calculation would not have affected its conclusions.

Non-parametric tests were used in some analyses because the data were out-with limits for skew and kurtosis. To examine co-variants, participants were split into groups according to which variable was being examined and a Mann Whitney U test was performed. To assess the association between experience and scores, a partial correlation was conducted. In this case the pre-training results were partialed out to reduce the impact of baseline knowledge levels on the results.

3.4 Inter Rater Reliability

Table 2 illustrates inter-rater reliability levels for each question.

Question	**Cohen's Kappa score (K)**	**95% Confidence Interval**	**Interpretation** (Fliess, 1981)
1	0.62	0.42 – 0.82	Good
2	0.53	0.21 – 0.84	Fair
3	0.57	0.35 – 0.79	Fair
4	0.83	0.68 – 0.98	Excellent
5	0.37	0.04 – 0.70	Poor
6	0.37	0.01 – 0.73	Poor
7	0.73	0.52 – 0.94	Good
8	0.62	0.31 – 0.92	Good
9	0.60	0.36 – 0.84	Good
10	0.85	0.59 – 1	Excellent
11	0.63	0.38 – 0.87	Good
12	0.56	0.30 – 0.82	Fair
13	0.79	0.56 – 1	Excellent
14	0.56	0.26 – 0.86	Good
15	0.36	0.10 – 0.61	Poor
16	0.66	0.48 – 0.84	Good
17	0.68	0.46 – 0.90	Good
18	0.55	0.32 – 0.78	Fair
19	0.72	0.45 – 0.99	Good

Table 2. The inter-rater reliability levels for each question

Weighted Kappa was used to determine these results and items with poor inter-rater reliability were omitted from the analysis. The implications of these results will be examined in the discussion chapter.

3.5 Demographics

The participants taking part in the training represented a total of six organisations. Five of the organisations were from the voluntary care sector (n = 78) and provided residential care and one represented the local authority (n=3). The staff from the local authority provided vocational day placements for clients. Thirty-nine participants (48%) came from one organisation, which highlighted an over-representation of this organisation within the sample.

21 percent of participants were male (n=18) and 79 percent were female (n=66).

Thirty two (38%) participants held the minimum nationally recommended qualification of SVQ level 2 or a nursing qualification (The Scottish Executive, 2005). Fifty two (62%) did not. Table 3 shows the main qualification held by each participant.

Main Qualification	Number of Participants
None	36 (43%)
SVQ 2 (Or higher)	19 (23%)
Nursing	13 (15%)
Other	11 (13%)
Psychology	3 (4%)
Social Work	2 (2%)

Table 3. Participants' main qualification

Participants' experience of working with people with learning disabilities (measured in months) ranged from less than one month to four hundred and ninety-two months

(41 years). The mean length of time spent working with this client group was ninety-seven months (Sd=87.22).

3.6 Exploration of the Data Set

The data was examined for skewness, kurtosis and variance, to determine whether parametric or non-parametric statistics should be used (Kinnear & Gray, 2004).

The definition of a learning disability (pre-training) and cognitive definitions (post training) data were skewed. The definition of a learning disability (post training and delayed) data and the cognitive definitions (post training) data were out with acceptable limits for kurtosis. Non-parametric tests were used for data out with limits for skew or kurtosis. Table four shows the information used to calculate skew and kurtosis.

	Pre-training		**Post-training**		**Delayed**	
Component	**Skew** (Std. Err = 0.414)	**Kurtosis** (Std. Err = 0.809)	**Skew** (Std. Err = 0.414)	**Kurtosis** (Std. Err = 0.809)	**Skew** (Std. Err = 0.414)	**Kurtosis** (Std. Err = 0.809)
What is a Learning Disability	1.114*	-0.08	-0.144	-1.328*	0.519	-0.529*
Cognitive Definitions	-0.649	0.253	-1.42*	2.552*	-0.091	-1.058
Cognitive Difficulties	0.006	-0.365	0.206	-0.568	0.257	-0.520
Strategies	0.576	-0.163	0.015	-0.814	0.456	-0.777

Table 4. Skew and Kurtosis exploration data.

The data were also examined for the presence of outliers. Table 5 identifies outliers.

Component	Participant number
What is a learning disability	n/a
Cognitive Definitions	21, 27, 33 & 53
Cognitive Difficulties	n/a
Strategies	66

Table 5. Participants identified as outliers.

Outliers were excluded from the component being examined to prevent their scores from unduly influencing the results. Where outliers were present, the statistics were run both with and without the outliers and any differences were reported. No differences in any scores were noted when the data were run with the outliers included. Copies of the box plots and histograms can be found in Appendix Ten. Table six illustrates the median and range of scores for the 'what is a learning disability' and 'cognitive definitions' data.

Component	Pre				Post				Delayed			
	Median	Range	Min	Max	Median	Range	Min	Max	Median	Range	Min	Max
What is a learning disability	0	2	0	2	2	3	0	3	1	3	0	3
Cognitive Definitions	4	6	0	6	5	6	1	7	5.5	3	4	7

Table 6. Summary data (what is a learning disability & cognitive definitions).

Table seven illustrates the mean, standard deviation and range of scores for the 'cognitive difficulties' and 'strategies' data.

Component	Pre					Post					Delayed				
	Mean	SD	Range	Min	Max	Mean	SD	Range	Min	Max	Mean	SD	Range	Min	Max
Cognitive Difficulties	2.74	1.41	6	0	6	3.61	1.76	7	0	7	4.53	1.90	8	1	9
Strategies	4.06	2.42	10	0	6	7.03	3.35	12	0	7	8.59	3.78	13	1	9

Table 7. Summary data (cognitive difficulties & strategies).

3.7 Change in Participant Knowledge over Time

Examination of participant knowledge levels was conducted to see whether their knowledge declined, remained stable or increased at the post training and delayed points. Table 8 (overleaf) shows changes in participants' performance over time.

		Decline in Knowledge	Knowledge remained stable	Increase in knowledge
Definition of learning disability data				
	Pre – Post Training (all participants)	n = 3	n = 31	n = 50
	Pre – Post Training (participants submitting only pre and post questionnaires)	n = 2	n = 19	n = 31
	Pre – Post Training (only participants submitting all three questionnaires)	n = 1	n = 11	n = 20
	Pre – Delayed Training (only participants submitting all 3 questionnaires)	n = 3	n = 9	n = 20
	Post – Delayed (only participants submitting all 3 questionnaires)	n = 9	n = 17	n = 6
Cognitive definitions data				
	Pre – Post Training (all participants)	n = 4	n = 17	n = 63
	Pre – Post Training (only participants submitting only pre and post questionnaires)	n = 4	n = 6	n = 42
	Pre – Post Training (only participants submitting all three questionnaires)	n = 0	n = 10	n = 22
	Pre – Delayed Training (participants submitting all 3 questionnaires)	n = 4	n = 3	n = 25
	Post – Delayed (only participants submitting all 3 questionnaires)	n = 11	n = 7	n = 14
Cognitive difficulties data				
	Pre – Post Training (all participants)	n = 6	n = 23	n = 55
	Pre – Post Training (participants submitting only pre and post questionnaires)	n = 4	n = 6	n = 42
	Pre – Post Training (only participants submitting all three questionnaires)	n = 1	n = 12	n = 19
	Pre – Delayed Training (only participants submitting all 3 questionnaires)	n = 5	n = 3	n = 24
	Post – Delayed (only participants submitting all 3 questionnaires)	n = 8	n = 4	n = 20
Strategies data				
	Pre – Post Training (all participants)	n = 5	n = 2	n = 77
	Pre – Post Training (only participants submitting only pre and post questionnaires)	n = 1	n = 1	n = 50
	Pre – Post Training (only participants submitting all three questionnaires)	n = 4	n = 0	n = 28
	Pre – Delayed Training (only participants submitting all 3 questionnaires)	n = 4	n = 1	n = 27
	Post – Delayed (only participants submitting all 3 questionnaires)	n = 8	n = 6	n = 18

Table 8. Participant knowledge changes over time

3.8 Statistical Analysis

Statistical Analysis of the 'Definition of a Learning Disability' Data

A McNemar's test showed that the post training 'definition of a learning disability' scores were significantly higher than the 'pre training definition of a learning disability' scores (X^2 = 25.71, p = <0.001, two-tailed test, N = 84) and that the 'delayed definition of a learning disability' scores were significantly higher than the 'pre training definition of a learning disability' scores (p = 0.02, two-tailed test, N = 32).

A McNemar's test highlighted no significant difference between the delayed definition of a learning disability scores and the post training definition of a learning disability scores (p = 1.00, two-tailed test, N = 32).

Statistical Analysis of the 'Cognitive Definitions' Data

Both the post training cognitive definition scores (t = -6.513, p = <0.001, two-tailed test, N = 79) and the delayed cognitive definition scores (t = -3.781, p = <0.001, two-tailed test, N = 27) were significantly higher than the pre training cognitive definition scores. No significant difference was found between the delayed cognitive definition scores and the post training cognitive definition scores (t = -0.19, p = 0.985, two-tailed test, N = 27).

Statistical Analysis of the 'Cognitive Difficulties' Data

The mean post training ability to identify cognitive difficulties (m = 3.71, SD = 1.690) was greater than the pre training ability to identify cognitive difficulties (m = 2.55, SD = 1.443). A paired t-test showed significance beyond the 0.01 level: t (83) = -7.523 (two-tailed). The 95% confidence interval of the difference was (-1.475 – -0.858); Cohen's d = 0.74, which is a medium effect size.

The mean delayed ability to identify cognitive difficulties (m = 4.53, SD = 1.899) was greater than the pre training ability to identify cognitive difficulties (m = 2.74, SD = 1.408). A paired samples t-test showed significance beyond the 0.01 level: t (31) = -4.890 (two-tailed). The 95% confidence interval of the difference was (-2.531 – -1.048); Cohen's d = 1.08, which is a large effect size.

The mean delayed training ability to identify cognitive difficulties (m = 4.53, SD = 1.899) was greater than the post training ability to identify cognitive difficulties (m = 3.61, SD = 1.764). A paired samples t-test showed significance beyond the 0.01 level: t (31) = -2.890 (two-tailed). The 95% confidence interval of the difference was (-0.275 – -1.567); Cohen's d = 0.67, which is a medium effect size.

Statistical Analysis of the 'Strategies' Data

The mean post training ability to identify strategies (m = 7.42, SD = 2.803) was greater than the pre training ability to identify strategies (m = 3.27, SD = 2.023). A paired samples t-test showed significance beyond the 0.01 level: t (72) = -12.292

(two-tailed). The 95% confidence interval of the difference was (-4.824 – -3.478); Cohen's d = 1.72, which is a large effect size.

The mean delayed ability to identify strategies (m = 8.67, SD = 3.903) was greater than the pre training ability to identify strategies (m = 3.96, SD = 2.175). A paired samples t-test showed significance beyond the 0.01 level: t (26) = -4.639 (two-tailed). The 95% confidence interval of the difference was (-6.788 – -2.620); Cohen's d = 1.55, which is a large effect size.

The mean delayed training ability to identify strategies (m = 8.67, SD = 3.903) was greater than the post training ability to identify strategies (m = 7.56, SD = 2.788). A paired samples t-test showed significance beyond the 0.01 level: t (26) = -1.226 (two-tailed). The 95% confidence interval of the difference was (-2.974 – 0.752); Cohen's d = 0.33, which is a small effect size.

Statistical Analysis Considering Co-variants

Type of care provider, qualified status and experience were considered as co-variants.

There were insufficient participants representing the local authority (n=3) to examine whether there was a performance difference between the local authority and private sector.

Mann-Whitney tests were used to examine whether there was a difference in performance in each domain between qualified and unqualified participants. Non-parametric tests were chosen due to the non-normal nature of all of the data sets. No significant differences between qualified and unqualified participant performance were noted.

Partial correlations (partialing out pre-training scores) for each knowledge area were conducted. These examined experience (measured in months) in relation to score. No significant correlations between experience and performance were observed for any knowledge area.

Chapter 4. Part One – Discussion

This discussion considers the main findings of this study and examines whether they are consistent with the wider research in this area. The strengths and weaknesses of this study are addressed and potential areas for future research are discussed.

Throughout the discussion there is repeated use of papers written by McKenzie and colleagues. This is a limitation that has occurred as a result of the scarcity of relevant published research.

4.1 Main Findings

The results of the study highlighted that participant knowledge of the 'definition of a learning disability', 'cognitive definitions', 'cognitive difficulties' and 'strategies' improved as a result of receiving the MacKinnon *et al.,* (2004) training package. This knowledge was retained when re-measured after a one month delay.

Hypothesis 1

Hypothesis 1 stated that 'there will be a significant increase post training in participants' ability to identify the criteria for diagnosing a learning disability.'

The post training 'definition of a learning disability' scores were significantly higher than the pre training 'definition of a learning disability' scores therefore hypothesis 1 can be accepted.

Hypothesis 2

Hypothesis 2 indicated that 'there will be a significant increase post training in participants' ability to define the concepts of attention, perception, time-perception, short-term memory, comprehension and expression'.

The post training 'cognitive definition' scores were significantly higher than the pre training 'cognitive definition' scores therefore hypothesis 2 can be accepted.

Hypothesis 3

Hypothesis 3 stated that 'there will be a significant increase post training in participants' ability to state how difficulties with the concepts of attention, perception, time-perception, short-term memory, comprehension and expression might impact on day-to-day functioning'.

The results of the paired sample t-test highlighted a significant increase post training in comparison to pre training scores on participants' ability to identify difficulties and how they may impact on daily functioning. Due to this, hypothesis 3 can be accepted.

Hypothesis 4

Hypothesis 4 stated that 'there will be a significant increase post training in participants' ability to give examples of how they would help someone compensate for the above cognitive difficulties'.

The post training 'strategies' scores were significantly higher than the pre training 'strategies' scores, therefore hypothesis 4 can be accepted.

Hypothesis 5

Finally hypothesis 5 reported that 'any post training gains in the above knowledge areas will be retained one month after training'.

When participants' pre training scores were compared with their delayed training scores, significant results were obtained for all areas (definition of a learning disability, cognitive definitions, cognitive difficulties and strategies). This indicated a significant improvement in knowledge when compared to the pre training knowledge levels.

On comparison of the post training scores with the delayed training scores, no significant results were obtained for any of the knowledge areas (definition of a learning disability, cognitive definition, cognitive difficulties and strategies). This highlighted that knowledge remained static when measured after a one month delay.

Since participants' knowledge levels remained significantly higher than their pre training level and did not significantly fall after a one-month delay, it is possible to accept hypothesis 5.

Implications of the Main Findings

All of the hypotheses were supported by the data obtained during the study, which illustrated that the MacKinnon *et al.,* (2004) package was able to enhance the short-term knowledge for the majority of the workers who attended the training. These findings shall be considered in terms of relevant research.

McKenzie *et al.,* (1999b) examined Community Learning Disability Team members, General Practitioners, residential staff and day service staff knowledge of the criteria required for diagnosis of a learning disability. This study highlighted poor levels of general knowledge from all participants however, residential staff were particularly noted to lack knowledge of the diagnostic criteria. McKenzie *et al.,* (1999a) also highlighted poor levels of participant knowledge when asked to name all three of the criteria. It must be noted that neither of these studies examined knowledge of specific areas of cognitive ability, the difficulties associated with deficits in these areas and strategies for supporting clients with these difficulties. Knowledge in all of these areas was found to improve following delivery of the MacKinnon *et al.,* (2004) training package, although these knowledge gains were only measured immediately after the training and after a one-month delay.

These findings illustrate the impact of the role of formal training in contributing towards staff knowledge. Learning theory suggests that learning occurs as a result of the student absorbing, considering and consolidating (Northedge, 1990) the material. Ideally, participants would have absorbed information on the training day and improved on this knowledge after they had left, having had the opportunity to look over the handouts and consolidate their learning.

Participants were noted to retain their knowledge in all areas except 'difficulties' when measured one-month after training although the short nature of the follow-up period must be acknowledged. Participants' knowledge of difficulties associated with a learning disability continued to improve when measured one month after training. It is unknown why this was the only area demonstrated to improve after training. It could be suggested that participants had used the time to consolidate their learning either in a formal manner or practically while working with their clients, although it is unclear why, if this were the case, knowledge in the other areas did not also increase.

Consideration of any Covariates

Qualified and unqualified participants' performances were examined for each of the main study areas to see whether any differences in performance could be highlighted. No significant differences were found between qualified and unqualified staff members. These findings were not consistent with the results of previous research. Lowe *et al.,* (2007) examined carers' performance during a course focusing on positive behavioural support. These researchers were able to demonstrate that

unqualified workers gained significantly more from this training than qualified workers. It was thought that these gains occurred as a result of unqualified staff putting in extra effort to obtain higher marks during written components of the course.

An analysis was also conducted to see whether experience (e.g. length of time spent working with the client group) impacted on performance. No significant correlation between experience and performance was noted. These results were consistent with the results found by McKenzie *et al.,* (2000) where no link could be established between experience and training outcome.

4.2 Ethical Issues

During the training several ethical issues became apparent. These involved participants:

a) Using too many identifying details when talking about their clients,
b) Using the training to check on the status of referrals to the Department,
c) Giving case examples that indicated that the client required a referral for professional assessment and intervention and
d) Expressing ethically ambiguous opinions.

Each of these issues will be discussed in turn.

Using Too Many Identifying Details

Steps were taken throughout the training to clearly outline the importance of confidentiality, including covering the issue of confidentiality at the beginning of the training session and reminding participants to remove all identifying details from any case examples they used. However, some additional reminders were required when a small number of participants attempted to talk about their clients in too much detail. Only one reminder was required to ensure that cases were then spoken about appropriately.

Using the Training to Ask About Referrals to the Department

Some participants were keen to either enquire about the status of referred clients or to get advice regarding specific behavioural issues. In the case of referred clients, the researcher asked to speak to the participants after the training session and she then ascertained the status of the referrals. These enquiries were handled out with training sessions and participants appeared satisfied with this.

Talking about Clients who Require a Referral

Where more specific advice was requested regarding clients' behavioural problems, general ideas were discussed. However, where appropriate, the participants were invited to refer their client to the Department of Clinical Psychology. Discussion on a general level, within the context of the training, permitted learning objectives to be met without an inappropriate overlap into areas requiring formal clinical guidance.

Expressing Ethically Ambiguous Opinions

Some ethically ambiguous opinions were expressed by some of the participants during the training (e.g. two of the carers viewing a client with psychosis as being a 'lost cause'). Participants' ability to voice these opinions was viewed as being positive because of the valuable insight into carer beliefs. Those beliefs were challenged where appropriate. The importance of staff attitudes and opinions will be considered in more detail later in this chapter.

4.3 Strengths of Study

The study had several strengths including its ability to increase the knowledge of the participants who attended the training, the demand for training, the standardised training package and its relevance to policy.

The Ability to Increase the Knowledge of Participants

The data obtained during the study identified that after the training session, participants increased their knowledge of a learning disability and associated cognitive components. They also improved their knowledge of difficulties associated with those cognitive components and strategies for helping support clients with these difficulties.

Participants' ability to identify difficulties associated with the cognitive components also continued to increase in the time between the end of the training day and the one

month retest point. Again, this improvement highlights the knowledge gains experienced by participants during this project, although it is not possible to attribute, with certainty, the post training gains directly to the training. In addition, one-month is a relatively short period of time for follow-up and it is possible that these knowledge gains may not have been maintained over a longer period of time.

The Demand for Training

While initially demand for the training was poor, it increased when a second wave of training was offered. At this point in time, the demand for training increased to the point that a waiting list was implemented. Unfortunately, it was not possible to provide training for all who requested it. The problem of meeting the demand for training could be tackled by instigating a rolling programme (Anderson *et al.,* 2006). This is one method of ensuring that training is available to everyone who would like to attend.

The Standardised Training Package

Using training based on a standardised teaching package ensured that only those elements of training that had a clear evidence base were included. It also promoted the delivery of training according to a standardised and consistent format. The use of a standardised teaching package also meant that the training was delivered taking into account principles of good teaching practice. The use of several multi modal teaching techniques while delivering the training program could be considered to be a strength. Changing the mode of teaching, such as switching from lecturing to a

video or group activity, allows participants to experience 'task breaks' which refreshes their ability to attend to the subject matter (MacKinnon *et al.,* 2004).

The Relevance to Policy

Another strength of this study was its relevance to policy. Several policy documents have emphasised that care workers should be appropriately trained (Scottish Executive, 2000; Scottish Executive, 2005; Department of Health, 2001). Research has also illustrated this position by highlighting that well trained staff provide a better quality of service (Fraser *et al.,* 1998) and demonstrating that in order to provide appropriate levels of support, staff should have a basic knowledge of the types of difficulties that their clients experience (McKenzie *et al.,* 1999b).

Good levels of staff knowledge and the provision of adequate levels of support have been identified as important for modifying client behaviour (Royal College of Psychiatrists, 2007). Staff being inappropriately skilled and inadequately trained can lead to inappropriate ways of working, which can result in clients displaying challenging behaviour (Royal College of Psychiatrists, 2007). Challenging behaviour can cause the client to experience negative outcomes such as health or social repercussions (Emerson, 2001) which can therefore result in referrals for psychological or pharmacological treatment (Royal College of Psychiatrists *et al.,* 2007). It is hoped that the implementation of measures, such as increasing staff knowledge through training, can be *one of many contributing factors* in reducing challenging behaviour (Royal College of Psychiatrists, 2007).

4.4 Limitations of Study

The main criticism of the study relates to the underlying rationale for its approach. Previous research examining the impact of staff training identified that participants are poor at being able to implement its content (Hastings, 1997; Hastings & Remington, 1994a). By focusing only on changes in staff knowledge, part one of the study failed to address this issue. With hindsight, the inclusion of a measure of the impact of the training on staff practice would have strengthened its results. The implications of this will be discussed in more detail later. Several additional study limitations can be identified and each will be discussed in turn.

The Inability to Link the Training to Practice

The lack of ability to link the results to participants' practice could be considered to be a study limitation. Without this link, the results of this research only highlight changes in knowledge. There is evidence suggesting that a change in knowledge levels does not always lead to a change in practice (Hastings, 1997; Hastings & Remington, 1994a). It has been suggested that this is due to other factors (McKenzie *et al.,* 2002) such as attributions about a client or their behaviour mediating how staff respond to a given situation (Hastings & Remington, 1994a). This research will be explored in more detail in the next section.

The Lack of Focus on Attributions

It has already been noted that some of the participants expressed ethically ambiguous opinions during the training. Beliefs and attitudes are particularly salient in light of the evidence which highlights that care staff are unlikely to change their practice as a result of training unless they also change their underlying beliefs (Hastings, 1997).

Hastings (1997) examined the impact of staff beliefs on practice and highlighted that the beliefs of staff can determine how they react to situations such as challenging behaviour from clients. Hastings (1997) concluded that staff training must examine the beliefs of those attending along with any attributions that participants have regarding client behaviour. Professionals providing training targeting staff beliefs and attributions need to be aware that within one staff team there may be different beliefs and attributions (Noone *et al.,* 2006) and they need to be aware that attributions can override any increases is knowledge achieved during training (Hastings, 1997).

The Possibility of a Ceiling Effect

It can be speculated that the lack of improvement in participants ability to define a learning disability, at the delayed measurement time point, could have been the result of a ceiling effect. For this area it was only possible to obtain a score from 0-3. The other areas had larger ranges and were therefore less sensitive to the possibilities of a ceiling effect. Since participants had already significantly improved at the post

training stage, it is possible that they were unable to further significantly improve purely as a result of the small scoring range.

The lack of improvement at the delayed measurement time point in the cognitive component and strategies areas may have been as a result of the concepts being too difficult either to understand or to remember. In addition some of these concepts may have been difficult to articulate on paper. It may have been that participants were unable to relate these areas to direct practice either because of their abstract nature e.g. perception or because the strategies were impractical for some reason. Further research would be beneficial to examine why participants appeared able to consolidate some parts of the training and not others.

The Short-Term Nature of the Follow-Up Period

It would have been preferable to set a longer retest time period for issuing the delayed response questionnaires. One month was a short time period in which to examine retention of knowledge. The training knowledge may have still been fresh in the memory of the participants. Assessing participants' delayed knowledge at agreed intervals such as three, six, twelve, eighteen and twenty-four month periods would allow for any deterioration in knowledge to be tracked and for optimal re-training intervals to be identified. This would be beneficial due to training costs being high financially (Ziarnik & Bernstein, 1982) and in terms of time (Allen *et al.*, 1990).

McKenzie *et al.,* (2000) incorporated a longer test-retest period in their study and managed to evidence that participants maintained knowledge up to 12 months after training. The findings of this thesis echo the findings of McKenzie *et al.,* (2000) in demonstrating that knowledge can be maintained after training; however the latter study only demonstrated this over a one-month period. It is worth noting that this thesis was unable to incorporate a longer retest time period due to its deadline, the initial lack of interest in attending and participants delay in returning questionnaire three.

The Lack of Formal Evaluation

The lack of formal evaluation of the teaching quality could be considered to be a methodological limitation. Participants were not asked to formally evaluate the training due to the length of the training and the amount of time that they had spent writing the questionnaires. However, an overall impression of the training as being useful and valued was gained. Some participants fed back verbally to the researcher about how useful the training was for them and others wrote these opinions on 'post it' notes and returned them with their final questionnaire. One of the organisations initially sent along their Management team and consequently sent their entire staff group. Requests have also been received for more training.

McVilly (1997) reported that staff valued training that assisted them to facilitate client choice, involve their clients in daily activities, improve their money handling skills and improve their ability to deal with challenging behaviour. McKenzie *et al.,* (1999a) noted in their research that a basic understanding of the concept of a learning

disability would enable staff members to be better placed to make decisions about more complex issues such as challenging behaviour. McVilly (1997) reported that some communication skills such as using symbolic systems and signing were not important training topics to the staff in their study. The inference that staff members thought the training was important was made as a result of analysing staff behaviour. During the sessions, participants appeared keen to receive all aspects of the training including the examination of symbolic communication and signing. These observations appear to conflict with McVilly's (1997) findings. Future training can incorporate assessment tools regarding the training and can therefore examine this conflict formally.

The Availability of Handouts at Follow-Up

Due to the availability of both the handouts and other knowledge sources (books, internet etc) it is not possible to determine whether participants used these to complete the third questionnaire. The researcher was vigilant about plagarism however, acknowledges its possibility. It is likely however, that such a strategy would have resulted in an increase in knowledge *across all areas*, which was not, in fact, observed. An alternative measure of evaluating the impact of training at follow-up, such as practice observation or structured interviews, would help avoid the potential limitation of participants copying their answers directly from the handout.

Consideration was given to providing handouts after the delayed measurement, however the knowledge could still have been gained from alternative sources. It is thought that a lack of handouts would have had a negative impact due to the length

of the training. Attention is extremely limited (Wood *et al.,* 2006) and the ability to retain information will be dependant on many factors such as comprehension of the subject matter (Crystal & Varley, 1998).

The Inability to Account for the Influence of Other Training or Personal Study

It is also impossible to determine the impact of other training on the results of this study. Formal training is not the only way that staff can gain knowledge. Knowledge can also be gained informally from colleagues or professionals providing clinical input (Hastings, 1995). It must be noted that there is also no 'absolute' level of knowledge; (McKenzie *et al.,* 2000) that is to say, a point in which workers have 'sufficient knowledge' and therefore do not need to acquire more. Those working should *always* strive to improve their knowledge and keep their practice evidence-based. In addition, knowledge is not static and needs to be applied if it is to benefit clients (McKenzie *et al.,* 2000). Some staff find it difficult to apply their knowledge in practice, particularly when dealing with clients of different levels of ability (McKenzie *et al.,* 1999a). As a result, it is important that this knowledge is not only learned but integrated into practice.

While a baseline level of knowledge was taken in order to examine initial knowledge levels, participants could have engaged in other types of study between completing questionnaires two and three. Due to this, it is impossible to determine whether any knowledge gain or retention, is a result of this training alone. Replication of the study could consider asking additional questions to see whether participants had

received any other formal or informal training and could either partial this out, or give it due consideration, when analysing the results. Incorporating a control group would also give an indication as to whether participants own learning impacted on knowledge.

The Organisational Representation of the Participants

The organisational representation of participants attending training could also be identified as a study limitation. The study relied on organisations to subscribe to the training and therefore send its employees along to attend the training. Unfortunately, during this study a bias was noted in the types of applicants attending the training. Only three participants attending training represented the local authority. This meant that the other eighty-one participants originated from non-statutory organisations. One organisation was over represented during the training by sending thirty-nine attendees. This was forty-six percent of the sample. The make-up of the sample differs from that of previous research which indicates that health and voluntary workers were more likely than private workers to attend training (Smith *et al.,* 1996).

Due to this, any generalisation of the results beyond the private sector must be done with caution. Despite the homogeneous sample, the results of the current study were consistent with previous published research, which also demonstrated that training can increase participants' knowledge (McKenzie *et al.,* 2000).

The Length of the Training

The length of the training (one day) could have been viewed as a study limitation. As a result of the length of teaching, participants would have struggled to sustain attention and remember all of the information.

The Questionnaires

While it has already been acknowledged that the training day was lengthy, the same criticism could also be levelled at the questionnaires used in this thesis. The questionnaires were designed specifically to cover the training package (MacKinnon *et al.,* 2004) and as a result were required to be comprehensive in order to cover each topic and knowledge area that the package examined.

Despite this rationale, the questionnaire was long and initially some participants commented that it was difficult and felt "like an examination." The questionnaires were given to participants at both the beginning of the day and the end of the day and they took approximately thirty to forty-five minutes to complete. Consequently, shorter questionnaires may have been more appealing to participants. The length of the questionnaires may have had the effect of causing participants to rush or to give brief answers and thus not giving a full reflection of their knowledge. This may have had an impact on participants' willingness to complete the delayed knowledge questionnaires and may have reflected the drop in return rate from ninety eight percent during the training to thirty nine percent when they were returned by post. It must be noted however that while the drop in return rate was substantial, a drop in

response rate for a postal survey is consistent with what is considered to be 'normal' in the literature (Clark-Carter, 2004; Barclay *et al.*, 2002).

The use of questionnaires to examine participants' knowledge could also be criticised. The ability to define terms is not necessarily linked to practice behaviour. Participants may also have struggled to understand or articulate terms that were complex in nature. To some degree, the use of questionnaires requires a minimum academic level from participants. It is possible that some participants may not be operating at this level.

The Reliance on Written Resources and Complex Ideas

A further limitation of this thesis was its reliance on written resources such as handouts and complex ideas. A notable proportion of the workers attending the training session indicated on arrival that English was not their primary language. Locally published research indicates that foreign workers represent an increasing proportion of the local workforce and within the host clinical area, the number of foreign workers has increased from 1270 in 2002/3 to 5230 in 2005/6. This increase represents over a three hundred percent increase in the foreign workforce population. This steep increase clearly demonstrates a clinical need for training to be adapted to meet evolving workforce needs. The possibility of adapting training to address these needs will be discussed later in this chapter.

The Poor Inter-Rater Reliability for some of the Scoring

The criticism detailed in the previous section illustrates how the questionnaires could benefit from being shortened. Some of the questions would also benefit from being modified. Cohen's Kappa indicated that questions five, six and fifteen all achieved poor levels of inter-rater reliability. Question five asked participants 'what is 'perception?'' and question six asked 'how would difficulties with perception effect a client's day-to-day functioning?' The concept of perception is vast and encompasses several different models and types of perception (Gross, 2005) and as a result, it could be hypothesised that it could be a difficult concept for participants to understand. Due to this, participants may have varied in the answers that they gave. It is possible that the poor levels of inter-rater reliability may have reflected a degree of variability in participants' answers and the requirement of the rater to show a higher degree of judgement when scoring these questions.

This argument can also be applied to question fifteen, which asks participants 'how would difficulties with comprehension effect a client's day-to-day functioning?' This concept also relates to understanding, however there is a subtle difference between perception and comprehension and their difficulties. Perception pertains to understanding information from the sensory organs (Gross, 2005) whereas comprehension relates to understanding what has been communicated (Crystal & Varley, 1998). Participants may not have understood this subtle difference, which again may have been reflected in their answers and caused difficulties with scoring. Tightening the scoring system and improving teaching for these sections would increase rater-reliability for these questions.

Due to the current inter-rater reliability concerns, all data from the unreliable questions were omitted from analysis. As a result of omitting two items from the difficulties domain, three of the remaining items achieved a 'fair' level of inter-rater reliability, while only one achieved a 'good' level of inter-rater reliability. This resulted in the difficulties domain being less reliable and therefore weaker than the other domains. Methods of addressing this include re-examining the scoring template for these areas in order to establish more consistency between raters or revisiting the training package to see whether the concepts could be explained in a clearer manner.

The Lack of Control Group

Another methodological limitation involves the lack of control group. Incorporating a control group would have assisted in evaluating the effect of other forms of training or personal study. McKenzie *et al.,* (2000) incorporated a control group into their study; these participants' knowledge was measured however they received no training. This addition helped to formally evidence that the training provided in their study was able to increase the knowledge of the workers who attended, compared to those who did not.

McKenzie *et al.,* (2000) were able to highlight that their control group displayed better levels of pre training knowledge than their experimental group. Post training, the experimental group displayed better levels of knowledge than the control group. This leaves an ethical dilemma regarding the control group. If their knowledge

remains poor after the training session, then this researcher would view training the control group as being an ethical obligation. This could have implications both in terms of funding and allocated research time for a project or clinically driven piece of research. Personal communication with the author elicited that training was provided to the control group once the results of the research had been collated (McKenzie, personal communication, 2008). The use of a control group in the current study could have enhanced the calibre of the project.

In summary, the current study could have been improved in several ways including; incorporating a practice element, examining participant attributions, encouraging consolidation of learning, evaluating the teaching, increasing the follow-up period, reducing the complexity and length of the questionnaires and using a control group. The next section will examine potential areas of future research.

4.5 Areas for Future Research

Several areas identified as limitations in the present study offer opportunities for future research.

Incorporating a Longer Follow-Up Period

It has already been noted that it would have been ideal to have a longer follow-up period. McKenzie *et al.,* (2000) were able to demonstrate retention of knowledge after a twelve-month delay. The follow up period in this study was determined by

the date of the last training day while also incorporating time for questionnaire return, data analysis and thesis write up. A repeat of the study should consider a longitudinal design with regular assessment. This type of design would have its own difficulties (e.g. staff retention and migration), which would need to be considered. Simple replication however, would not address the issues of a lack of examination of practice.

Incorporating a Practice Element

Any future research should consider introducing a practice element to the training. What staff report that they do while working with a client, may be different from their actions (Hastings, 1997; Mckenzie *et al.,* 1999). An assessment element examining staff practice may be a useful method of linking reported use of training information, such as implementing strategies, with actual use of this information. It may also help to assess the realities of practice. Changing practice could have the effect of reducing challenging behaviour and may also decrease the amount of aversive and therefore unhelpful strategies used informally by some staff members (Hastings & Remington, 1994b).

Assessing practice may also demonstrate whether or not staff have a practical grasp of the concept of a learning disability, rather than a purely academic understanding. It may be possible to do this via clinical observations of staff (Banister *et al.,* 1995) or by asking staff to complete worksheets and reflective logbooks about some of their work (Friesner & Hart, 2005). Hastings and Remington (1994b) suggest that functional analysis is conducted to help alter staff behaviour and to move training

suggestions into practical outcomes. In order to examine any practice effect, observations would need to be conducted pre training in order to establish a baseline and at regular post training intervals.

McKenzie *et al.,* (2002) incorporated a practical element into their research by asking participants to complete a series of client related tasks. These tasks were assessed using a periodic service review approach and the researchers were available to provide support if it was required. This type of approach could also be considered as a method of incorporating practice into the research.

It must be noted however, that studies examining staff practice can pose methodological problems due to the fact that it is not possible to control all of the variables 'in situ' (Noone *et al.,* 2006). Observing practice can also cause problems due to the fact that the presence of an observer can also change the dynamics of a situation (Banister *et al.,* 1995) and make it artificial. The same criticisms can apply to the use of reflective logbooks or worksheets (Friesner & Hart, 2005). In addition, assessing practice may not always be feasible due to the level of input and time that it would require from both staff and trainers.

Examination of Participant Attributions

It has already been demonstrated that taking into account staff attributions and beliefs is important when attempting to modify staff behaviour (Hastings, 1997). Future research could measure staff attributions and should target training at modifying unhelpful attributions as well as increasing staff knowledge.

Encouraging Consolidation of Learning and Knowledge Enhancement

To help ensure that improvements in knowledge levels after training do not deteriorate significantly over time, future research could look at ways of encouraging participants to consolidate their learning. The handouts provided in the present study were intended as a resource that staff could access after the training. It is not known whether they were successful in achieving this aim. While there was no deterioration in any of the areas of knowledge measures, only one area had increased at the one month follow up. It is possible that other types of teaching methods such as learning logs, workbooks or computer assisted teaching could be used to help participants consolidate and enhance their learning (Northedge, 1990). Tools such as logs could be shared with Managers, senior workers, a trainer or a researcher and could be used to examine real life practice (Friesner & Hart, 2005).

Future research could also look at when the training could be refreshed using shorter reminder sessions and whether staff would be interested in support such as e-learning packages. It has already been identified that training is expensive both as a result of the money required to send a participant to training and also to provide additional staff to cover that individual while they are away (Ziarnik & Bernstein, 1982). Providing short refresher courses and access to resources such as e-learning tools, may be a way of allowing participants to build on and consolidate their initial learning, without placing too much strain on the organisations employing them. Any use of such initiatives should be done with monitoring and evaluation to ensure an evidence-based assessment of their effectiveness.

Evaluating the Teaching

Should the study be re-designed, formal evaluation of the teaching should be incorporated. This would allow for participants' opinions of the training to be formally explored. This would have the benefit of identifying areas of teaching that the participants found difficult and perhaps investigating the reasons why this was the case. Ultimately, evaluations could be used to help refine the training to be more efficient and pitched at a level appropriate to the needs of the staff group.

Designing a Training Package

The current project used a standardised training package, however future research in this area may be strengthened by the design of a tailor-made package. Designing a package would allow for all of the topics to be covered precisely as desired and could compensate for some of the problems encountered during this thesis. Namely it would ensure that a good evidence base was established for all aspects of the teaching package. When the relevant research for the MacKinnon *et al.,* (2004) package was examined it quickly became clear that the 'coping with change' section lacked a sufficient evidence base for use within this thesis and it was consequently removed from the study.

Designing a training package would also allow for the training needs of a specific clinical area to be addressed. A locally published piece of research has noted that there has been an increase in the number of foreign workers locally. Several workers

attending the training indicated that English was not their primary language. Specifically designing a training package aimed at people who speak English as a foreign language would help to ensure that everybody attending the training had a good chance of understanding the subject matter.

The present study highlighted a high demand for training however it has been noted that a Psychologist's time is valuable and should make efficient use of NHS resources (DCP Division of Clinical Psychology, 17th July 2008). Future research could examine alternative models of delivering training and evaluate the differences (if any) between models and their associated implications. Alternative models that could be evaluated include cascade training (Morgan & Deutschmann, 2003), 'in-house' training (Bull & Halligan, 2002) and rolling training programmes. Each training model has its own associated implications.

4.6 Summary

The discussion has highlighted several issues. The results of the study demonstrated an increase in participant knowledge of the definition of a learning disability, its cognitive components, the difficulties associated with deficits with those cognitive components and the strategies that can be used to help support clients with these difficulties. They also highlighted that participants retained this knowledge one month later.

These results highlighted some ethical issues including participants remembering to maintain confidentiality and participants trying to ascertain the referral status of some of their clients during the training.

The knowledge gains experienced by participants, the demand for training, the standardised nature of the training package and the relevance of the thesis to clinical work were all identified as being project strengths. Study limitations included the inability to link the training to practice, the lack of focus on participant attributions, the short follow up period, the lack of formal evaluation techniques, the organisational representation of participants, the lengthy questionnaires, poor inter-rater reliability of some of the questions and the lack of control group.

Areas for future consideration should include incorporating a practice element, examining participants' attributions, encouraging participants to consolidate their learning, introducing evaluation of the teaching and examining different training modes.

Chapter 5. Part Two – Method

5.1 Rationale

The aim of part two was to gather information about the clinical utility of the training by conducting qualitative interviews with staff. Several methods of achieving this aim were considered including periodic service review, focus groups, observations, and interviews.

Replication of the original study while addressing its limitations was not feasible. For example, it would not have been possible to include a longer follow-up period and it may have been difficult recruiting participants who had not participated in part one. Focus groups were also rejected due to the difficulties of gathering participants together both in terms of time and location. Workplace observations were considered unrealistic due to the lack of baseline measurements. Qualitative interviews were selected because they allowed the researcher to examine details of what participants remembered in their own words, and also gave participants the opportunity through Interpretive Phenomenological Analysis (IPA) to raise other issues surrounding the training.

5.2 Design

Part two is a qualitative study that used IPA to examine what participants remembered about the training (MacKinnon *et al.,* 1997) and whether they believed that the training had had any impact on their practice. Alternative qualitative methods such as discourse analysis and grounded theory were considered but rejected because discourse analysis focuses on participants' linguistic representations (Starks & Brown Trinidad, 2007) while grounded theory focuses on social occurrences and attempts to provide an account of the development of these processes (Starks & Brown Trinidad, 2007). The present study aimed to examine participants' constructions of the training, in terms of their recollections of it and their beliefs about its impact on their practice. IPA was therefore selected as an analysis tool due to its emphasis on participants' conceptual reconstructions of an experience (Murray & Chamberlin, 1999).

Two papers written by Dunne & Quayle (2001; 2002) were specifically consulted in order to familiarise the researcher with the process and presentation of IPA. One paper examined the impact of a diagnosis of Hepatitis C on sufferers' lives (Dunne & Quayle, 2001). This paper used several focus groups to elicit information from participants and identified that diagnoses had disrupted large areas of their lives and had impacted on their sense of identity. The second paper examined disclosure of a diagnosis of Hepatitis C to friends and family members (Dunne & Quayle, 2002). This paper again used focus groups to examine the process of disclosure and illustrated its stressful and difficult nature.

A literature search for examples of IPA conducted in the field of learning disabilities highlighted few papers. Whittington & Burns (2005) published a relevant paper examining the dilemmas associated with the topic of 'challenging behaviour' encountered by carers. This study used semi-structured interviews to examine these dilemmas and highlighted that staff struggled to work out whether behaviours were a result of communication difficulties or behavioural problems. It also examined their responses to challenging behaviour and the feelings that this elicited. Particular attention was paid to the style, process and presentation of these papers.

Individually conducted, semi-structured interviews were used because they are considered to be best practice during interview-based research (Barbour, 2008). They allow participants to talk within a focused subject area without being overly constrained by a completely structured schedule (Smith, 2008). A copy of the interview schedule can be found in Appendix Eleven.

5.3 NHS Ethical Procedures and Approval

There was a time gap of approximately twelve months between the training sessions and gaining ethical permission to conduct the interviews. Ethical permission was granted on the 27th November 2008 (Appendix 12) and Research and Development authorised the study on the 18th December 2008 (Appendix 13).

5.4 Sample Size Considerations

Optimal sample sizes for IPA range from one to ten participants (Starks & Brown Trinidad, 2007; Smith, 2008) with five or six being considered an optimal number (Smith, 2008).

5.5 Participants

Inclusion Criteria

All participants who attended one of the training days offered during part one of the study were invited to attend an interview. Participants were included in this part of the study if they contacted the researcher to request an interview.

Recruitment

Eighty-four people were invited to attend an interview (Appendix 14). Seven participants contacted the researcher. One withdrew from the study through non-attendance. Participants were asked to sign a consent form (Appendix 15) notifying them that the interview would be tape recorded and transcribed for analysis. Each participant was paid ten pounds in expenses by the researcher on completion of the interview. Each interview lasted for approximately one hour.

5.6 Ethical Considerations

Participants were requested to protect the identity of their clients. Where required any identifying information was removed from the transcripts. Participants were told that they should only discuss information that they were comfortable to talk about.

5.7 Process

In order to ensure quality and integrity each step of the analysis has been documented to increase transparency (Flick, 2007). This helped to establish credibility (Sandelowski, 1986).

Qualitative research was a novel process to this researcher. Due to this, an experienced researcher was consulted at each stage to ensure accuracy and credibility. Reflective notes were taken and were considered in order to ensure that the researcher did not bias interpretation. This process will be discussed further in the results and discussion section.

The interview schedule (Appendix 11) was developed based on the aim of the study (Barbour, 2008) which focused on examining participants' recollections of the training and their beliefs about its impact on their practice. The questions were developed while being mindful of participants' abilities and limitations (Barbour, 2008) to ensure that the questions were appropriate and understandable. Open-ended questions were designed and each had a follow-up question that was used to prompt

the participant to further elaborate on their response (Barbour, 2008). The questions were used as a guide and participants were able to talk spontaneously about topics in order to get a sense of how they conceptualised their experience of the training.

Each interview was recorded. After each interview the researcher listened to and transcribed it. This assisted the researcher to become familiar with the data. Once transcribed, the interview was listened to again, in order to check for errors and to increase familiarity. Line numbers were added to the transcripts and margins were included on each side of the text in order to provide space for the coding process.

The transcript was read through several times and was examined for meaning and themes (Smith, 2008). During the initial readings the researcher made comments regarding any patterns or interesting occurrences within the left margin (Smith, 2008). Once initial notes had been made, the researcher examined the comments in order to identify potential themes which capture the qualities of what is occurring within the text (Smith, 2008). At this point the researcher also made more abstract decisions regarding the content of the text and engaged in psychological interpretation of its content without deviating from its essence (Smith, 2008). Once this process had been performed on all of the interviews, all of the themes were collated onto separate pieces of paper. The themes were examined and clustered together into larger concept areas or master themes in order to attempt to conceptually organise the data (Smith, 2008). The themes were examined for exceptions, commonalities and contradictions (Barbour, 2008) and relevant literature was examined and reported in order to contextualise the findings. Reflective notes

were also considered and the results were interpreted. These were considered where relevant in the Results and Discussions chapter. Smith's (2008) work was used to guide this process in order to ensure quality.

Coding

Once the first interview had been coded, it was examined concentrating on what was felt to be the essence of the experience as constructed by the participant (Starks & Brown Trinidad, 2007). Emerging themes were noted in the left margin and each subsequent interview was examined while considering the earlier identified themes (Starks & Brown Trinidad, 2007). Initially the emerging themes appeared to cluster across several broad areas. These areas included themes related to training, carers, organisations and clients. Table nine illustrates these broad areas.

Themes related to training	**Themes related to the carer**	**Themes related to the organisation**	**Themes related to the client**
Struggling to remember	The importance of being self reflective	Feeling abandoned and left to 'get on with it'	Awareness of differences in ability between clients and 'general population'
Using own examples to make sense of theory	Managing rifts between personal beliefs and practice	Feeling supported by organisation	Struggling with the concept of normalisation
Belief that training provides confidence	The importance of remaining mindful of clients wishes and choices		Overestimation of clients
Belief that training and experience are separate elements of caring	Importance of ability to empathise with clients		Importance placed on experience and rapport with the client
Training affirming practical approach	Being unsure of what to do (when training not working)		An awareness of diverse nature of clients
Fear of 'academic' nature of training	Struggling to balance risks vs duty of care		
Fear of being judged negatively during training	Importance placed on a caring personality		
Enjoying attending this training			
A sense that training is beneficial			

Table 9. Emerging Themes Clustered into Broad Areas

On examination, the areas identified in table nine appeared static and did not address some of the important characteristics of the data. An emerging theme matrix was therefore created to identify which participants spoke about which emerging theme. A copy of the emerging theme matrix can be found in table ten.

Theme (X = theme present in transcript)	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**
Struggling to remember	X	X	X	X	X	
Using own examples to make sense of this training	X	X	X			X
Overestimation of clients		X		X		
Importance placed on experience/rapport with clients		X	X		X	X
Managing rifts between personal beliefs and practice	X	X				X
The importance of self reflection						X
Awareness of differences in ability (clients Vs general pop)	X	X	X	X	X	
Working with the concept of normalisation			X			
Importance of ability to empathise with clients	X		X		X	X
Must be mindful of clients wishes and choices					X	
Training provides confidence		X	X	X	X	
Belief that training and experience are separate						X
Training affirming practical approaches					X	
Fear of academic/technical elements of training						X
Fear of negative judgement during the training						X
Importance of being caring					X	X
Balancing risks vs. carers duty to intervene				X	X	X
Being unsure of what to do (when the training not working)					X	
Feeling abandoned and left to get on with it		X	X	X		
Feeling supported by organisation						X
An awareness of diverse nature of client group						X
Enjoyed this training	X		X	X	X	X
Feeling that training was beneficial	X	X	X	X	X	X

Table 10. Emerging Theme Matrix

This information was used to re-examine the relationships between the emerging themes in order to capture the qualities pertinent to the research question.

Reducing the data in this way ensured that its volume was manageable in terms of discussing it in a relevant and meaningful way. On the basis of this analysis, four master themes were identified and have been illustrated in Table Eleven following the example provided by Dunne and Quayle (2002).

Master theme	**Source**
Training provides gains	A sense that training is both enjoyable and useful
Difficulties associated with training	Participants struggling to remember the content of the training or expressing worries relating to training
Difficulties associated with practice	A sense of being unsure of what do to
A carer requires specific qualities	Comments and discussions regarding important personality traits and the relationship between carer and client

Table 11. Master themes.

Once the master themes had been identified, the transcripts were re-read and a document was produced to evidence each time the master themes were discussed in the transcripts (appendix 16). A master theme matrix was also developed to identify what master themes were spoken about by which participants. Table twelve illustrates the master theme matrix.

Master themes (X = master theme present in transcript)	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**
Training provides gains	X	X	X	X	X	X
Difficulties associated with training	X	X	X	X	X	X
Difficulties experienced during practice	X	X	X	X	X	X
A carer requires specific qualities	X	X	X		X	X

Table 12. Master theme matrix.

The information within the master theme matrix was compared and contrasted to look for commonalities, patterns and exclusivity (Barbour, 2008). These will be discussed during the results section.

Chapter 6. Part Two – Results and Discussion

Any important demographics will be examined. The results of the IPA will be examined and discussed. Relevant reflections will be discussed followed by a consideration of study two's limitations.

6.1 Demographics

Six participants were interviewed. Two were male and four were female. Two of the participants had changed employment since the training, however were working with similar client groups. Of the four participants who remained with their original employers, one worked for the local authority while the other three represented three different private organisations. One participant could be considered to be qualified (as set forth in National Care Standards) and five could not.

6.2 Transcript Analysis

Each of the four master themes identified will be discussed in turn.

Training provides gains

During the interviews all of the participants spoke about the training (MacKinnon *et al.,* 1997) in terms of it providing some form of benefit to them. Participants spoke

about training either being enjoyable or important or imparting some form of practical benefit to them. These benefits will be considered in turn. During the interviews the participants gave a sense of having enjoyed attending the training.

> "I've enjoyed all my training and I certainly enjoyed that one [*understanding the concept of learning disabilities*]... I can tell you that I did enjoy it and like I say I'll have my wee paper [*referring to course handouts*] to look back on [*at this point participant produced the handouts and showed them to the researcher*]" (P6, Pg23, L19-23).

> "... I think I enjoyed it..." (P1, Pg11, L28).

> "To be quite honest it was one of those sort of training that you come away and think 'ah that's great...'" (P3, Pg21, L43-45).

Participants also appeared to place importance on the training.

> "I think that training is important and the more the better... because you can get fixed in your own team and your way of thinking..." (P2, Pg27, L15-18)

> "... I think it's a valuable training... we had the activities as well... which consolidates what we sort of learnt in the theory and put in into practice" (P3, Pg21, L33-37).

> "... I mean I was keen to come on your training because I was quite new to... the voluntary sector and to learning disabilities as a whole and... so... I thought it would be great to have something like that for the whole organisation..." (P3, Pg15, L31-39).

Participants reported experiencing various gains as a result of attending training.

> "... I think it's [*attending training*] a lot healthier, it's an outlet for you, getting rid of some of the stuff that you have got" (P2, Pg 24, L25-27).

> "I think it improved my depth of knowledge in as much as a lot of the information that was imparted..." (P4, Pg7, L1-3).

> "I found it very interesting listening to the experiences of some of the other people who were on the course..." (P5, Pg20, L39-42).

From these transcripts a feeling of the training as being beneficial can be sensed. One participant valued the training to the degree that she brought along the handouts which she repeatedly said was to show the researcher what they meant to her. This behaviour appeared to be a demonstration of the value that this participant placed on this information. However, the enjoyment expressed by the participants seems to stand in contrast to how much they appeared to remember. It may be that the gains they identified are not the ones that were initially measured during part one of the research. For example, one specific benefit of training that some participants discussed was an increase in confidence.

> "...It [*talking about the training*] definitely gave me more of a confidence in meeting our service users..." (P5, Pg11, L2-4).

> "It was reassuring that there wasn't anything very much that came out that was absolutely new information to me..." (P4, Pg7, L10-12).

> "It [*referring to the training*] made me feel much more positive about what I could do, ah I think before then I tended to regard 'it' [*referring to what would happen when meeting clients for the first time*]... the possible outcomes as being more negative... that I was concerned about things going wrong rather than the fact that I could possibly do something right but that was probably more my level of confidence" (P5, Pg18, L43-50).

Training providing increases in confidence has been well illustrated in the literature. NHS 24 workers increased their confidence to deal with mental health issues following a 3-day workshop (Payne *et al.,* 2002). These results were mediated by experience with less experienced staff members experiencing significantly greater improvement in confidence than more experienced staff. This study measured confidence using scales and vignettes. It is wondered whether the results could have

been strengthened by the addition of workplace observations to see whether these gains occurred within reality. Call centre work within an acute setting can be unpredictable and workers can face different situations at different levels of difficulty therefore how workers respond in-situ may be different from how workers respond when they are able to take time to think about a hypothetical situation. Practical observations may help to address these difficulties.

School workers who received a one or two day training package examining self-harm also reported increases in confidence for dealing with this behaviour (Robinson *et al.,* 2008). These gains remained evident six months later. Research conducted within the field of learning disabilities has indicated that challenging behaviour training can increase reports of staff confidence. Confidence was noted to have improved even more when measured after a three month delay. Interestingly, these studies were unable to illustrate gains in knowledge (Payne *et al.,* 2002; Robinson *et al.,* 2008) or positive attribution change (Tierney *et al.,* 2007), which provides an argument that training can provide benefits other than an increase in knowledge.

Confidence is a reoccurring theme within this study and the literature (Payne *et al.,* 2002; Robinson *et al.,* 2008). This led the researcher to speculate whether carers coming into the field of learning disabilities have a lower confidence or self-esteem. A literature review returned sparse research regarding these suggestions. During this literature search one report (Scripps Gerontology Centre, 1996) was identified which focused on specifically recruiting workers from disadvantaged backgrounds into care work. Organisations within the state of Ohio experienced difficulties recruiting staff

into care work. This state therefore focused on encouraging school age workers with no qualifications and people from low-income families relying on welfare benefits, to consider care work. People from these cohorts were counselled and mentored as they progressed into this work and unsuitable candidates were identified during this process. This report identified the success of this scheme, however, acknowledged the time consuming nature of recruiting and training this particular group of people. This report did not examine how these workers felt about engaging in this type of work and did not specifically examine confidence issues. It is wondered whether the ongoing provision of counselling and training would have addressed these types of issues. This is an area considered worthy of further research.

While participants reported various gains that they had experienced as a result of training they also reported some difficulties, both in relation to training and also to practice.

Difficulties Associated with Training

While participants were generally positive about the training session, various difficulties associated with the training became evident for all participants.

The participants clearly struggled to remember the content of the training and 'Difficulties remembering' was the most frequently represented theme within the transcripts (Appendix 21). This was a source of some frustration both to the researcher and participants during the interviews as it led to difficulties in trying to examine their knowledge of the training and its impact on their practice.

> "[*Participant has been asked to talk about what they remember about the training*] … [*long pause*] … [*participant laughs*] … specifically, mnnnn that could be quite difficult." (P2, Pg1, L9-10).

> "…Um yeah I was trying to think back, can't believe it was a year ago already actually [*participant laughs*]… um let me have a think, what else do I remember um…" (P3, Pg1, L23-28).

> "[*Participant has been asked to expand on communication*] Yep, um… I actually remember um, ah… it was with regards to that subject, being subject during the training… um… [*There is a long pause then participant lets out a loud breath and smiles*]…" (P1, Pg3, L41-45).

Participants could, at times appear confused regarding the content of the training.

> "… Uh how much of this is about what I remember and how much of this is other stuff I don't know" (P4, Pg1, L35-37).

> "…. Ugh how difficult, I'm not sure how much if it is what I remember from your training or how much of it's what I've come to get from our clients" (P5, Pg2, L7-10).

At times they spoke about activities or information that was not part of the training nor associated with the current research but which they clearly attributed to that training.

> "[*Talking about attention*] we played a tape of somebody talking but there was all this background noise and all this… other things going on and you had to pick out the conversation um and it was just to demonstrate how some people with learning difficulties find it really hard to tune into something when there are all these different distractions" (P1, Pg3, L29-36).

Participants demonstrated difficulties reconstructing their experiences of the training. These difficulties may have resulted from a combination of factors such as struggling to understand the training, memory loss or contamination. Participants may have worried about 'getting it wrong' particularly because the interviewer also conducted

the training. Additionally they may have struggled to articulate some of the topics discussed during the interviews. This theme seems important since it is possible that some of the current tools used to assess the value of training such as questionnaires and vignettes may not sufficiently capture this difficulty.

Despite experiencing difficulties reconstructing the content of the training, participants appeared to make sense of it by relating its content to their own experiences.

> "[*Participant talking about themselves and a family member*] ...we're both hard of hearing so sometimes I rabble away to him and I've said something but he seems to think I have said something totally different and its his perception of what I have said..." (P6, Pg6, L32-37).

> "I remember thinking back to one of my clients and how that would fit in and what you would do." (P1, Pg2, L45-47).

It could be argued that the use of personal examples to illustrate the concepts of perception, communication, attention and time-perception demonstrates consolidation of material. One of the participants gave a detailed example, which demonstrated some degree of behaviour change within their family life, as a result of attending the training.

> "[*Talking about using what was learned from the training during real life*] I do have an elderly relative... I am not too sure whether its his memory or his attention... but I do have to repeat myself a lot so it is more about addressing his name first and so to get his attention and when saying what I have to say and if he says 'what' then repeating it again" (P1, Pg10, L39-45).

Another participant spoke about how they used information spoken about during this training to assist with working with a client with concrete and literal understanding.

> "[*Talking about modifying ambiguous phrases*] there are... thousands of phrases that we actually take for granted and know that... you wouldn't be drawing the curtains [*referring to sketching them with a pencil*] so I think you... have to think about how you use language... when you are speaking" (P3, Pg8, L42-47).

The inability to articulate specific elements of the training may have been a result of their academic ability. Limited evidence suggests that the educational achievement of residential staff is lower than that of nursing home or hospital assistants (Yamada, 2002). One participant specifically spoke about experiencing difficulties with academic aspects of training and worried about being judged negatively as a result.

> "[*I*] just shy away from it [*talking about group discussion and written elements of training*], I think its something that I can actually understand, that's why I'm quite good with people with learning disabilities because I know my fears, I know my limitations and faults, I know how sometimes it must be... when people are ... asking all of these questions and you want to curl up into a ball... and you don't want to make a fool of yourself" (P6, Pg13, L37-46).

> "I know that when you [*the trainer*] are doing things you [*are*] going to have to use all these lovely words which you know I struggle with personally. But I have a dictionary, I don't have any problems with that either but... I... froze to death when you said you had a paper [*referring to the questionnaires*] to go through" (P6, Pg22, L32-38).

This participant also spoke about a 'fear of academic elements of training' and used emotive language during these discussions (e.g. 'make a fool of yourself', 'froze to death' etc). It could be argued that this language demonstrated the strength of their feelings. This participant's fear of technical elements combined with their desire to attend the interview appeared contradictory. During the interview the participant expressed how important this training had been and again this may reflect the fact that the training impacted on participants in ways that were not formally measured during part one of the study.

Difficulties Experienced During Practice

Several practice related difficulties associated with the training were also discussed during the interviews and were raised in some form by each participant. This suggests that these issues were a common feature resulting from attending this training. Particularly salient to the issue of training, was the issue of what to do when suggested strategies failed to work.

> "[*Talking about using anchor points which was discussed during the training*] … which didn't always work…" (P5, Pg5, L12) and "…unless you knew roughly what they were doing during the day you hadn't got anything to pin it on, so you just hoped it was a day when you knew that they were going to a lunch club or something…" (P5, Pg5, L35-40).

This participant clearly attempted to adapt this strategy because of its failure. It is thought that incorrect adaptation may result from a lack of appreciation of its theoretical basis combined with an urgent need for an approach that works. These types of failure could lessen the efficacy of training and may result in the participant being less likely to request psychological intervention due to the previous 'failure' of what the participant considered to be a psychological approach.

It must be acknowledged that this was raised exclusively by one participant but it is possible that it was not mentioned by the others because of their desire not to offend the researcher. This type of difficulty may have also been a factor in people deciding whether to request an interview. If training lacked face validity, then participants could be reluctant to further participate. Incorporating practical observations or

support sessions after the training may assist participants to address any difficulties with its content.

Several participants also spoke about experiencing difficulties in balancing their duty of care with permitting their client to take risks.

> "I suppose that's very key for us in learning disability, that's important for us to know to what extent someone is able to function in the world in a safe way, the fact that someone could find their way from one end of [*place name*] to the other doesn't necessarily mean that they can do it safely in terms of traffic…" (P4, Pg16, L40-45).

Difficulties balancing duty of care with promoting independence appear to evoke a feeling of tension within the carer. This tension may result from a lack of confidence about allowing the client to take risks and being able to identify what 'appropriate risks' are. It is possible that the introduction of policies such as the 'Adult Support and Protection' 2007 legislation may have further clouded these issues with carers potentially being fearful of allowing clients to take risks in case of litigation. The following extract gives a sense of being fearful of the result of allowing the client to take risks.

> "She's [*talking about a service user*] so protected that she's not getting allowed to try more things and I think because its all about too scary or too, this is going to happen… but we are trying to say no, this is going to happen so we are stuck between a rock and a hard place sometimes" (P6, Pg19, L12-18).

These concerns are echoed within literature (McKenzie *et al.,* 2000; Mckenzie *et al.,* 2001; McKenzie *et al.,* 1999a). Research has highlighted that staff are aware that they have a duty of care towards their clients (McKenzie *et al.,* 2001) however they struggle when asked to respond to vignettes asking them to practically apply this

duty (McKenzie *et al.,* 2001; 1999a). Staff also struggle to appropriately intervene, even when provided with guidance (Brown *et al.,* 1994). Carers have to regularly make decisions regarding whether or not to exercise their duty of care, however they may be unaware of what to consider when making this decision (McKenzie *et al.,* 2001). This confusion appears to occur as a result of carers' legal obligations clashing with the need to take risks in order to learn (McKay, 1991; Grant *et al.,* 2005). Staff may need to take specialist advice about this and this requirement may be obvious for some situations (such as in the case of a client wishing to engage in a sexual relationship) however not for others. It is possible that training, combined with post-training support could assist staff with these types of difficulties.

It is interesting that carers indicated that this training helped to increase their confidence. This may result in reduced levels of tension regarding minor risk taking.

> "[*Talking about skill teaching*] I suppose giving someone the opportunity to try something and observing them enough times until we have confidence that we will be able to maintain that level of functioning" (P4, Pg13, L42-46).

This participant highlights almost a need to 'test' the client and to build up their own confidence in the client's ability before reducing levels of supervision. The tension experienced by staff could be explained in terms of its complexity, given the fact that duty of care continually evolves depending on the state of the client, situation, task being attempted and other factors (McKenzie *et al.,* 2001).

While participants spoke about these difficulties, the researcher occasionally experienced a sense that the client's ability was being overestimated. This was demonstrated during the following extracts:

> "[*Talking about communicating with clients*] they can do it quite subtly in a way that makes you think that they do have a higher degree of understanding than they in actual fact do" (P4, Pg3, L26).

> "Its easy for me to see a lack of progress [*referring to the development of client skills*] and perhaps what I should recognise is that progress is slow" (P4, Pg13, L8-9).

Carer overestimation of a client's ability is a phenomenon that has been highlighted within the literature (Bartlett & Bunning, 1997); this often results in low levels of interaction (Chatterton, 1999) and the use of complex and inappropriate language (Bradshaw, 2001) without the support of communication tools such as augmentation (Bloomberg *et al.,* 2003). This phenomenon is known to be greater across unstructured settings (such as residential establishments) where the client is less able to use environmental cues to aid understanding (Bartlett & Bunning, 1997). It has been demonstrated that training can assist carers to overcome these difficulties (Bartlett & Bunning, 1997; Bradshaw, 2001; Smidt *et al.,* 2007; Chatterton, 1999).

The struggle to balance duty of care with risk taking, combined with possible overestimation of a client's ability could be linked to a sense of confusion regarding the principle of normalisation (Bartlett & Bunning, 1997). The principle of normalisation aims to promote the participation of marginalised groups, such as people with a learning disabilities, so that they become valued by society (Wolfensberger, 1983). While trying to facilitate the principles of normalisation, carers may forget that their clients have a diagnosis of learning disability and may not adapt their approach accordingly (Bartlett & Bunting, 1997). However, despite the learning disability, each client has their own profile of relative strengths and

weaknesses that may also add to the confusion regarding how the client should be treated.

> "I just tend not to want to treat people any differently but then I suppose sometimes you do have to be aware that only some people capture words that they want to capture and they act on those" (P3, Pg3, L10-14).

> "I suppose its trying to get the balance between having that information in your head when you are speaking to somebody and you know not trying… to show them that they are not being treated any differently" (P3, Pg4, L33-37).

Despite this confusion, carers appear to have embodied principles that they should adapt their own practice in order to facilitate client understanding.

Participants also spoke about struggling with their personal beliefs during the course of their work.

> "Its can be very easy to impose… your standards…" (P5 Pg16 L9-14)
> "[*Speaking about participant's own standards*]… some people regard tidiness as being an essential in life and some people don't… I mean we have service users at both ends of the spectrum… some are incredibly tidy… to others that it could be a problem [*cough*] sitting down." (P5, Pg16, L19-26).

> "You do go along and you sometimes think to yourself 'am I doing the right thing' or 'am I… keeping secrets' so that what it is really, you are keeping things back and you are always… being taught to be up front [*and*] always say what is going on…" (P6, Pg10, L33-39).

These types of conflict may occur as a result of low levels of confidence. This may also affect the carer's ability to act autonomously and make decisions without consulting another colleague or a supervisor. It could be argued that the change in the type of care from hospitals and large institutions towards small homes situated within the community has resulted in the ability to act autonomously being an important skill in care work. Carers often engage in lone working and as a result

need to be comfortable making decisions. It could be argued that care plans, experience, client knowledge, regular supervision, training, specialist input and appropriate legal processes, where applicable, could assist the carer to manage these conflicts.

Due to this, organisational support is considered to be important. Lack of support has been linked to feelings of isolation or abandonment, and in turn, higher stress levels (Rose *et al.,* 2003; Hatton *et al.,* 1999a; 1999b). This stress can be moderated by other factors such as client and worker personality (Rose *et al.,* 2003), environmental characteristics (Hatton *et al.,* 1999a), client disability, workplace demands (Rose *et al.,* 2003) and stigma (White *et al.,* 2006). Lack of support has also been linked to staff sickness and difficulties with staff retention (Hatton *et al.,* 1999b).

Feelings of abandonment impacts on clients as well as staff and has been associated with an increased likelihood of placement breakdown (Broadhurst & Mansell, 2007). Successful placements correlate with carers receiving regular support from line managers, regular contact with other staff and the provision of training (Broadhurst & Mansell, 2007).

During this research some of the participants expressed feelings of abandonment.

> "[*Participant has been talking about requiring more help to do the job and has identified training as a form of help*] nae to just be left to get on with your work, I mean there are things [*that*] goes on in the projects as well, those things can be combined in a project and I think its good when we are out of the project hearing things from other people" (P2, Pg19, L46-50).

This participant later goes on to state

> "Well everything's getting paired back… there dunna seem to be any extra… and that seem's to be getting whittled out… and I mean it's quite natural, there is nothing that you can do about that" (P2, Pg22, L23-35).

From this description, there is almost a sense that the participant has resigned themselves to the fact that in the future their organisation will provide less rather than more support. Another participant summarized their feelings as follows.

> "[*Speaking about the trial and error element of direct working*] you… try and work it out until you get a result I suppose" (P3, Pg11, L47-48).

Further interpretation of the participants use of language could argue that this participant feels hopeless about this issue. This participant later clarifies their point further by stating

> "We [*referring to her organisation*] don't have… this kind of training and you know an organisation that supports people with learning disabilities… it's not very good" (P3, Pg15, L39 - 43).

> "[*Talking about taking up his post within the organisation*] a lot of the information that was imparted I kind of picked up along the way not having any training or a background in learning disability…" (P4, Pg7, L2-5).

Not all of the participants however felt this way. One participant clearly felt supported by her organisation and stated

> "[*Talking about opportunities for personal development and training*] I must give them ten out of ten for that, because we then do if there's something we are not sure about they will ask at your supervision what we would like to be trained in and if they can find a course, they will" (P6, Pg21, L42-46).

Clearly disagreement exists within the present sample regarding the degree to which individuals feel supported by their employers with regard to training.

On considering these factors, it could be argued that the difficulties associated with this training must be negated by its benefits. It is thought that this is the case because four out of the six workers requested more training despite talking about difficulties arising as a result of it. Any future training provided should attempt to address the identified difficulties in an attempt to maximise its benefits and to minimise confusion and frustration.

During the interviews, one final master theme emerged as a result of the opinions that participants held regarding which qualities make a 'good' carer.

A Carer Requires Specific Qualities.

Despite the difficulties discussed in relation to training and practice, carers also gave a sense that carer qualities are important for working with people with a learning disability.

> "Whether you are in a nursing home or in the care that we've been given and I think that we all need to be a bit more caring, just a bit more thoughtful about what we're actually doing …" (P6, Pg20, L29-34).

> "I have worked with people who are uncaring and basically all they want to do is come in and baby sit and as far as they're concerned they are 'caring'" (P6, Pg23, L31-34).

Another important component of caring identified by participants was their use of skills such as empathy.

> "I just hadn't got my thoughts around how our service users would perceive… the world around them… the training had encouraged me to think about how they might view the world from… their point of view rather than trying to inflict what I was seeing on them…" (P5, Pg15, L38-48).

> "[*Talking about challenging behaviour*] a lot of the times it [*the behaviour*] could be because they are frustrated um and I think it's probably made me think of... the way I would behave if... I was angry or if... I didn't want something to happen..." (P3, Pg18, L35-37).

> "[*Talking about attending the training*] I was probably made more aware of... how they were thinking, you know I could put myself in... their shoes a lot easier and understand why they didn't hold what I was saying then for example why they got worried..." (P, Pg, L).

Linked into these skills was an opinion that experience was also an important aspect of working with clients and that getting to know the clients better resulted in improvement in their ability to understand their client.

> "[*Talking about working with the client*] a little bit queer at the time but you just become, both parties get to know each other ...you seem to reach a working relationship, its curious... the more times you go out to see em, and the first time is like a blank wall but then over a period of time [*pause*] and then its five years later, I feel like I ken [*know*] them quite well and them me" (P2, Pg6, L7-16).

> "[*Talking about communication*] because a lot of the time you can pick up on the language maybe they've made up their own kind of signs or... they have their own... symbols for things as well and I think that depending on how well you actually know that person... we have people in our project who... don't necessarily use Makaton but they would use a sign for something... but it would be a sort of question of you getting to know what the person means by that sign..." (P3, Pg9, L43 – Pg 10, L4).

> "I just haven't got enough experience... of or to know them well enough to... have any idea, basically unless its fairly obvious, what is required" (P5, Pg7, L14-17).

Participants were able to link some of the difficulties mentioned during this study to the importance of being reflective about their practice.

> "It's actually just stopping for a minute and actually thinking... what do you really want them to do and what [*do*] you want them to understand..." (P6, Pg2, L44-46).

> "I think I'm always looking to do the best and I always [*want*] them to have the best, but is it my best or their best…" (P6, Pg15, L27-29).

It could also be argued that an awareness of the types of qualities that are important in caring is another example of self-reflection that, in this case, has clearly been demonstrated by participants.

Specific qualities such as a caring nature, empathy, self-reflection and the ability to build rapport were valued by participants during this study. These are similar to the qualities of empathy, unconditional positive regard and genuineness that Roger's (1942) identified as being valuable within the helping relationship. It is wondered whether participants had identified the importance of the relationship. This importance has been captured in the wider research, which has examined its influence when attempting to effect therapeutic change.

Bordin (1979) defined a therapeutic relationship as being a bond between the therapist and their patient where goals are mutually determined and the patient wishes to work with the therapist to achieve these goals. MacNiel and colleagues (2009) examined the influence of the therapeutic relationship and concluded that good therapeutic relationships are more likely to encourage engagement, acceptance of difficulties and to effect change. When searching for the mechanism behind this, there appears to be a lack of consensus regarding which qualities are important. Different researchers have identified important qualities including; good communication skills, feeling safe, trust (Gilbert *et al.,* 2008) empathy, sharing, (Norcross, 2002) being caring, honesty (Horvath, 2006) the presence of transference

and a linking bond (Meissner, 2006). Respect and shared goals were noted to be common qualities identified by these researchers. It can be seen that participants in this study listed some of the qualities identified in the research.

While disagreement exists regarding which qualities are important (Horvath, 2006), researchers have noted the importance of the presence of these qualities within all relationships (Horvath, 2006). Peplau (1991) highlighted the presence of a 'therapeutic alliance' within nursing relationships. This researcher claimed that this relationship could impact on quality of life and he and other researchers were able to identify that patients living in the community could be prevented from hospital admission by the presence of a good therapeutic relationship (Fakhoury *et al.,* 2007).

It is thought that when participants spoke about the characteristics that they thought were important, they unknowingly were addressing the wider issue of qualities of what constitutes a good therapeutic relationship (Priebe & McCabe, 2006). Interestingly, all participants in this study except one spoke about this topic. This participant had a management role and it could be hypothesised that this role resulted in them adopting a different perspective.

6.3 The Reflective Process

During the study, the researcher took reflective notes. IPA requires researchers to be aware of what they bring to the research process. However, unlike some other qualitative approaches, researcher perspective is not a core element of analysis

(Starks *et al.*, 2007). Care was taken to ensure that any reflective notes or researcher interpretation was identified within the analysis. Again this ensured transparency of process in order to maintain quality (Flick, 2007).

During this process the researcher observed occasional feelings of frustration as a result of participants' difficulties remembering or articulating their experience of the training. The researcher used her reflective log to explore the possible sources of frustration in order to make every effort to ensure that these were not biasing the results. She monitored these feelings and using the principles of counter-transference wondered whether the participants also felt frustrated.

Qualitative research was a novel process to the researcher and she found this approach at times very challenging due to its lack of concrete processes and assumptions. Due to this she worried about ensuring that her work was sufficiently interpretive and relevant to the research aims while remaining credible and embedded within participants' responses. Again these feelings were monitored to ensure that they did not bias the qualitative process. During the analysis and write up the researcher was aware that she had become more comfortable with the process of qualitative research. As a result of her interest regarding the analytical process and emergent results, she is keen to expand on her knowledge and to undertake further qualitative research.

6.4 Study Limitations – Part Two

Consideration must always be given to the presence of researcher bias within qualitative interviews. While reflective processes were acknowledged and monitored, the effect of the researcher within an interview situation must always be noted. The mere presence of an interviewer is enough to alter the dynamics of an interview (Gilbert *et al.,* 2008) even if this is only to the extent of its length or the participant's fluency and willingness to speak (Cleary *et al.,* 1981). IPA is a process where experiences are conceptualised through the interpretations of a researcher (Starks *et al.,* 2007). Being reflective (Starks *et al.,* 2007; Sandelowski, 1986) and using the qualitative processes identified by Smith (2008) was a method of ensuring that the effect of researcher bias was minimal.

It is possible however that, participants only spoke about training providing benefits in order to please the researcher. This is known as the "experimenter effect" (Corston, 1992: 51) and it occurs when the experimenter's presence alters participant response. It is possible that participants wanted to be kind and therefore gave some form of response when asked 'what gains, if any, had they experienced as a result of attending the training?' It could be argued that if the participants had not believed they had experienced any benefit or interest in the training then they would not have attended for an interview. This may account for the low number of participants who requested an interview. If this was the case then it is possible that the participants' views were not representative of the overall sample used during part one of the study.

Chapter 7. Linking Theory to Practice

7.1 The Congruence of Concepts Raised by Participants

Part two of this study was used to assess whether participants in part one had altered their practice as a result of attending the training. One aspect of examining the clinical utility of the training would be to assess what participants remembered of the topics covered and how accurately these reflected the information given to them.

The most common type of data source used in IPA is the semi-structured interview (Smith, 2008). These capture participants' unique perspectives of an experience (Starks *et al.,* 2007), in this case a training package (MacKinnon *et al.,* 2004). However, it is possible that some participants discussed the concepts being examined in more detail than others. The congruence of participants' use of concepts examined during the training compared to what was actually taught provides additional insight regarding its clinical utility. Due to this, it is important to pay attention to those times when participants spoke about the topics covered. When examining the text, it could be seen that participants spoke about the content of the training in terms of the following concepts.

- What is a learning disability
- Attention
- Perception
- Time-perception

- Short-term memory
- Communication

Table fourteen uses a matrix to illustrate which participants spoke about what concepts. Appendix Seventeen highlights the textual occurrences of participants talking about concepts.

Theme	P1	P2	P3	P4	P5	P6
What is a learning disability?		X	X	X	X	
Attention	X		X	X	X	
Perception	X					X
Time-perception		X	X	X	X	X
Short-term memory			X			X
Communication	X		X	X	X	X

Table 14. Concept Matrix.

The congruence of how these concepts were used in training and how participants discussed them during their interviews will be discussed in more detail.

What is a Learning Disability?

Four participants spoke about the definition of a learning disability during the course of their interviews. Some of the participants were able to generally talk about the criteria required for diagnosis with accuracy

> "[*Talking about assessment of a learning disability*] …perhaps IQ but also associated with people's ability and, or inability to function in society… the key thing would be around not only the mechanical definition like you know

IQ 70… but also about how it affected peoples' ability to function in society" (P4, Pg2, L44 - P3, L5).

"[*Talking about struggling to remember the definition*] …under, starting under 18… IQ of less than 75… could be well out… and difficulties with day-to-day living" (P5, Pg1, L39-46).

"[*When asked to expand on his use of the term learning disabilities*] …damage to the brain that has nee [*not*] developed to the same extent, like our brains, say so their's a limit, with the level of understanding that's there." (P2, Pg7, L30-33).

This participant appears to be talking about the cognitive components to a learning disabilities and they later go on to clarify

"…Is going to develop how different areas of the brain develop… that control different aspects of your thinking and even your movements and stuff that are controlled by that" (P, Pg, L).

Some participants also demonstrated an understanding of possible genetic factors by being aware of the presence of additional syndromes or diagnoses in terms of client presentation.

"Because our guy's got [*syndrome name*] so that effects…" (P2, Pg8, L9-10).

"One of our clients has learning disabilities and cerebral palsy as well" (P2, Pg8, L22-23).

"…They [*referring the client group*] can develop other conditions… [*she then goes on to talk about a specific syndrome*]" (P3, Pg12, L34).

Other participants displayed inaccuracies in their concept of what constitutes a learning disability.

"…Technically its somebody… who has it from birth until they're 16…" (P3, Pg12, L30-33).

This participant later goes on to contradict them self by saying

> "Its kind of a condition which affects… your intelligence, I think its if you've got a lower IQ than 75… you're supposedly got a learning disability… and I know that… anything after sort of 16 or 18 is classed as a brain injury, I think" (P3, Pg12, L43-50).

This description clearly highlights some deviation from the training regarding the concept of a learning disability; however it must be noted that the general concepts are still correct.

It could be argued that a lack of understanding of the concept of a learning disability combined with the sense of overestimation of the client group identified during IPA could lead carers to provide inappropriate levels of care. It is acknowledged however, that having an accurate concept of the criteria required for diagnosis of learning disability would not impact negatively on performance at work. It would be important to address these questions during future research.

Attention

On occasions some of the participants' spoke about the concept of attention.

> "[*When asked to define her use of the term attention*] …limiting distractions … it can be quite a noisy house… and when you were trying to tell a service user something, like put the television off and reducing the background… and if you were doing pictures… make sure that they could see properly… take out any distracters… like anything moving in the background…" (P1, Pg8, L33-41).

> "[*When asked to expand on stating that clients are at risk as a result of their deficits*] …sometimes about concentration of the person is able to cross the road safely but if they lack concentration in doing that they may not pay sufficient attention to the traffic…" (P4, Pg5, L20-24).

> "[*When asked to define attention*] the amount of time it[*s*] maybe stored in the memory or… is stored in the part of the brain… that deals with attention… people with attention [*difficulties*] can be easily distracted by something else that's going on…" (P3, Pg23, L24-36).

This participant then goes on to say

> "I'm just remembering now so keep the noise down when you are trying to talk and make sure that you can get them on their own so there is no other distraction, or turn the TV down…" (P3, Pg24, L8-10).

It is noted that participants tend to talk in terms of difficulties and strategies. It is possible that these carers do not place importance on the academic elements of training such as remembering definitions, but rather on those elements, such as strategies, that they might find useful. The strategies discussed regarding the concept of attention were consistent with the discussions held during the training sessions.

Perception

Perception was a topic that was only spoken about by two participants.

> "[*Talking about the exercises used to illustrate concepts*] it was the picture that you can either look at like an old woman or a young woman and that there was a danger that people could perceive things differently… the television showed us how people with a learning disability can perceive a pen as anything… that's a stick kinda thing… sometimes they have not got the information to perceive it like a pen then they will think its something different and they won't understand what you are talking about" (P1, Pg3, L6-20).

> "[Talking about a family members hearing defect] sometimes I rabble away to him and I've said something, but he seems to think I said something totally different" (P6, Pg, L35-37).

It is clear from this participant's description that they are not talking about what is termed 'comprehension' in the training because they later go on to specify that the

lack of understanding is due to factors linked to the reception of sound waves. It is clear that this participant has understood the subtle difference between perception interpreting information from the senses (Gross, 2005) and comprehension being the understanding of information that is being communicated (Crystal & Varley, 1998).

Again, neither participant attempts to define perception as demonstrated during the training. This may have been a result of academic definitions remaining unimportant in terms of their work, or it may have been the abstract nature of the concept of perception.

Time-Perception

All but one participant spoke about the concept of time-perception. The increase in the number of participants talking about time-perception may have occurred as a result of the more concrete nature of this concept or as a result of difficulties with time-perception being more frequently identified and experienced. The following descriptions of time-perception difficulties experienced by clients were given

> "…Some people have a difficulty in understanding… the timing that the clock shows it and it may be that we will have to use more concrete examples to enable them to… have an idea of time…" (P4, Pg6, L8-12).

> "…They [*referring to their service users*] have got their association with actions and stuff… where there is an understanding of time, it could be different from ours, I mean I kanna [can't] say for sure…" (P2, Pg10, L35-39).

> "…Clients not being aware of… the appropriate time to get up or to… have a meal or… which day of the week it is and not being able to cope with the concept of… something happening in three weeks time… that their brain doesn't' process the fact that its going to be three weeks time away, they can

necessarily work out whether its… going to happen tomorrow or never…" (P5, Pg4, L7-15).

"One particular lady is like that, if you say we are going to a party tonight, seven o clock in the morning she will be up and she will be dressed, waiting…" (P6, Pg8, L11-14).

Carers also appeared to have good knowledge regarding the types of strategies that they might use to assist someone with difficulties orienting themselves in time

"[*Talking about a rigid routine*] …it seems to help them, they ken fit [know what] place they are at the day and fit [*what*] is coming next" (P2, Pg10, L42-44).

"[*Talking about the use of clear and concrete 'time' language*] it would sort of be a good thing to try and get the person to sort of lead up to the change as opposed to just you know, drop it on them… the next time we do this in 'two more sleeps' and stuff like that… so giving people… time to adjust" (P3, Pg7, L5-11).

These descriptions were congruent with descriptions provided during the training. Two participants specifically spoke about the use of 'anchor points' to help orientate their service users in time

"…Like time for lunch… we will do this after lunch, we will do this before tea or whatever that might have more meaning than talking about doing something at half past two or at five o clock" (P4, Pg6, L12-17).

"…You had to try and tell them when they were going to be getting support, so that they didn't go out and… they would rely on your saying before lunch or after lunch…" (P5, Pg5, L4-7).

While the first participant's answer was consistent with the training, the second participant displayed some inconsistencies. The training spoke about 'anchor points' being based on fixed and regular occurrences however this participant stated that

> "You hoped it was just a day when you knew they were going to a lunch club or something… otherwise you were sort of slightly stuck saying that you know well maybe when you have had a cup of tea they [*support worker*] might be with you" (P5, Pg5, L39-45).

This may have been a result of this participant misunderstanding this strategy, the researcher being unclear in their explanation of it or the client lacking sufficient markers to use it.

Short-Term Memory

Two participants spoke about the concept of short-term memory. The first tried to define short-term memory.

> "[*When asked to say what they meant by 'memory'*] The person in the video would only… remember… the first three seconds of the sentence or the first thirty seconds… and by the time he got into the kitchen he's just remembered like 'cup' or something and he couldn't' go any further [*referring to the task the client was about to undertake*] because he hadn't actually remembered the rest of the sentence…" (P3, Pg8, L2-9).

This participant appeared confused with the term and was not congruent with the definition given during the training. The second participant spoke about a strategy used with people with short-term memory deficits. This information was consistent with what was spoken about during the training

> "[*Referring to the strategy of 'chunking' for a client 'who can not remember'*] …if you ask somebody to do something we need to take it easy… they don't always… if you do that that and that… we maybe need to go through it step-by-step… well you do this first, then you…" (P6, Pg2, L36-37).

Again the use of congruent language with practical rather than theoretical use seems to highlight that participants tended to remember this type of information.

Communication

All but one participant spoke about the subject of communication. It is noted that participants tended to use communication as a global term whereas the training specifically spoke about the concepts of comprehension and expression. This represents an incongruence between how the training presented this information and how participants made sense of it. The specific categories within the topic of communication may not be important for staff members in terms of being able to utilise the information.

Participants defined communication as being

> "The ability to meaningfully exchange information, I guess with other people… and meaningful being the key word, people can exchange words without necessarily adding any substantial content to it" (P4, Pg3, L13-17).

> "[*An*] interaction between two people… of being [*able*] to exchange ideas between, if need for proper communication, it needs to be a two way thing… verbal, written…" (P5, Pg11, L35-46).

The similarities between participants and the training's definition of communication may have resulted from it being more familiar than some of the other more academic concepts. Participants were able to talk about the communication difficulties.

> "We understand the subtleties of humour whereas they [*service users*] might not… they may take things literally…" (P3, Pg8, L20-23).

Participants' communication strategies were congruent with what was discussed during the training. Participants spoke about augmentation

> "[*When talking about a practical adaptations put into place after the training*] ...we had put up very clear labels for example of the cupboard, we had put a picture of a cup up to help with communication and... we would do very visual rather than saying swimming tomorrow we would get out a sheet of paper and demonstrate tomorrow through symbols and demonstrate swimming so that the person is not just picking up swimming and think that they were going then" (P1, Pg6, L12-21).

> "[*Talking about speaking to clients*] making sure it [*her speech*] was clear, making sure I wasn't using anything that they wouldn't understand... abstract ideas... using very concrete conversation" (P1, Pg9, L5-10).

> "[*Talking about a service users communication board at their day centre*] ...has a complete board with photographs to... indicate his wishes and...sort of cakes and sweets and...tea, coffee... lunch, toilet..." (P5, Pg6, L27-32).

Participants also spoke about keeping communication short, simple and concrete

> "I think that... using short, simple sentences and then waiting until they [*the client*] appear to have understood and repeating it in exactly the same way rather than changing it... because if you change it then they are still trying to process what you said first time and then if you change it, it will just make things a lot harder" (P1, Pg6, L43-50).

This ability to talk about communication in an accurate manner might have been a reflection of its importance to building and maintaining good relationships (Gilbert *et al.,* 2008). By nature of their work, carers may be more skilled in relationship building and therefore communication. This theory is worthy of further research.

7.2 Further Considerations

Part two of this study used IPA to address the clinical utility of the training package (MacKinnon *et al.,* 2004) administered during part one. Six participants agreed to be interviewed. When wondering why so few people asked for an interview, it is

speculated that some of the difficulties spoken about during the analysis may have been contributing factors to attendance.

Part one of the study identified that participants' knowledge of a learning disability and its associated deficits could be improved and part two attempted to examine the practical utilities of this training package. Participants struggled to remember the training and to articulate the concepts discussed during the training, however they appeared to experience benefits that were not considered during part one of the study. It could be argued that some of the benefits identified are less tangible in terms of their measurement.

Participants also reported that this training had given them more confidence. Further exploration of the links between training and confidence would be worth pursuing. It would be interesting to examine whether this confidence is limited to certain carers and to what degree it alters workplace behaviour. Future research may wish to consider observation or practice evaluation in order to address this question.

The interviews also highlighted a variety of difficulties both in terms of training and its practical application. While participants appeared to struggle to remember the content of the training and at times appeared confused, generally their understanding of the topics remained congruent to the information disseminated. This consistency may have been a result of attending other courses, participating in further study or their experience. One participant was concerned about being negatively evaluated during this training and future training may wish to decrease the focus on definitions

and increase the focus on strategies. Further research to design 'carer friendly' training would be worth considering.

It is not worth pursuing training if it is not useful for those attending. This study demonstrated an immediate and short-term knowledge gain. Twelve months later participants struggled to remember its content, however discussions about concepts were generally congruent with the information disseminated during training. It is not possible to link the accuracy of participant knowledge exclusively to the MacKinnon *et al.,* (2004) training package. It is likely that this congruence is a result of a combination of factors including training, experience and additional study.

During this study participants spoke about several difficulties. It is thought that some of these difficulties, such as a lack of organisational support and what to do when strategies fail, could be addressed through the provision of post-training support. Additional support could be available either clinically or by incorporating follow-up sessions as part of a training protocol.

Chapter 8. Conclusion

There have been many different terms to describe a person with a learning disability (Digby, 1996) which has contributed towards confusion regarding the concept. Diagnosis of a learning disability requires that the client experiences significant impairment of intellectual ability and adaptive behaviour and that they experience these problems before they reach the age of eighteen (World Health Organisation, 1992). Specific cognitive deficits are associated with having a learning disability (Emerson *et al.*, 1998) and it is argued that understanding these can contribute towards the provision of good support. Policy has highlighted the importance of appropriately trained staff members supporting people with learning disabilities (Scottish Executive, 2000; Department of Health, 2001; Scottish Executive, 2005). Research has also highlighted the importance of staff training (Smith *et al.,* 1996; McVilly, 1997; McGray & Carter, 2003) and has demonstrated that care staff struggle to define a learning disability (McKenzie *et al.,* 1999a; McKenzie *et al.,* 1999a). Research has been able to illustrate that whilst staff knowledge is poor, training can significantly improve this knowledge (McKenzie *et al.,* 2000).

Part one of the thesis examined whether a one-day training package (MacKinnon *et al.,* 2004) could improve carer knowledge of the concept of a learning disability, its associated cognitive deficits, the difficulties associated with these deficits and strategies for helping to support a client with these difficulties. All care staff within the project's geographical area were invited to attend a free training day examining the above concepts. Eighty four staff members participated in the training.

Specifically designed questionnaires were used to examine participant knowledge. A scoring system was designed to examine participants' results and inter-rater reliability was examined. A partial correlation, paired sample t-tests, McNemar Tests and a Wilcoxon Signed Ranks tests were used to examine the results for significance.

The results of the inter-rater reliability indicated fair to excellent results for most of the scoring system. Poor inter-rater reliability was found for the definition of perception, difficulties with perception and difficulties with comprehension questions. Wilcoxon Signed Ranks tests and a paired samples t-test indicated that participants significantly increased their knowledge levels after the training for their ability to identify a learning disability, its cognitive components, difficulties caused by deficits in these component and strategies that can be used to help clients overcome these difficulties. These knowledge gains were maintained when measured one month later. Participants' knowledge for difficulties caused by deficits with cognitive components continued to significantly rise after the training session indicating consolidation of learning. Participants' experience or qualification did not impact on the results.

Part one of the thesis highlighted several ethical issues for consideration and contained several strengths and weaknesses. These were examined and, where possible, placed within the context of wider research. Several areas for future research were considered and suggestions were made regarding improving the project in the event of its replication.

A qualitative study using IPA was conducted to address the clinical utility of the training package. IPA identified training benefits that were not considered during part one of the study, including an increase in confidence. Difficulties resulting from training were also highlighted and the fact that participants struggled to remember the training. Practical difficulties were also identified and these included struggling to balance acceptable levels of risk with duty of care and feeling abandoned. Participants also placed importance on several carer qualities that reflected those identified by the literature examining therapeutic alliance.

To conclude, part one of this thesis achieved its aim of increasing participants' knowledge of the concept of a learning disability, its associated cognitive deficits, difficulties caused as a result of those deficits and strategies that can be used to help support a client with those difficulties. This knowledge was maintained when measured one month after the training session. Twelve months later participants struggled to remember its content however discussions about concepts were generally congruent with the information disseminated during training. IPA identified areas of benefit and several difficulties associated with training and practice.

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Appendix One: Part One – Letter granting ethical approval

PLEASE NOTE: ALL LOGOS AND NAMES HAVE BEEN REMOVED TO PROTECT CONFIDENTIALITY

Local Research Ethics Committee

Telephone:
Facsimile

25 October 2006

Dear

Full title of study: **An investigation into care staff knowledge of the concept of learning disability and to whether a training package can alter any deficits in this knowledge**

REC reference number:

Thank you for your letter of 12 October 2006, responding to the Committee's request for further information on the above research and submitting revised documentation.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised.

Conditions of approval

The favourable opinion is given provided that you comply with the conditions set out in the attached document. You are advised to study the conditions carefully.

Condition 1: Annual Progress Report

Under the Central Office of Research Ethics Committees (COREC) regulations NHS Research Ethics Committees are required to monitor research with a favourable opinion. This is to take the form of an annual progress report which should be submitted to the Research Ethics Committee 12 months after the date on which the favourable opinion was given. Annual reports should be submitted thereafter until the end of the study.

Points to note:

- The first annual progress report should give the commencement date for the study. This is normally assumed to be the date on which any of the procedures in the protocol are initiated. Should the study not commence within 12 months of approval a written explanation must be provided in the 1st annual progress report.

- Progress reports should be in the format prescribed on the COREC website

- Progress reports must be signed by the Principal Investigator/Chief Investigator.

- Failure to submit a progress report could lead to a suspension of the favourable ethical opinion for the study.

- Please note the Annual Progress Report is a short 3 page form which is extremely easy to complete.

Condition 2: Notification of Study Completion/Termination

Under the Central Office of Research Ethics Committees (COREC) regulations researchers are required to notify the Ethics Committee from which they obtained approval of the conclusion or early termination of a project and to submit a Completion/Termination of Study Report. Researchers should follow the instructions on the COREC website

Points to note:

- For most studies the end of a project will be the date of the last visit of the last participant or the completion of any follow-up monitoring and data collection described in the protocol.

- Final analysis of the data and report writing is normally considered to occur after formal declaration of the end of the project.

- A Final Report should be sent to the REC within 12 months of the end of the project.

- The summary of the final report may be enclosed with the end of study declaration, or sent to the REC subsequently.

- There is no standard format for final reports. As a minimum we should receive details of the end date and information on whether the project achieved its objectives, the main findings and arrangements for publication or dissemination of research, including any feedback to participants.

- Please note the Completion/Termination of Study Report need only be a summary document and should, therefore, be easy to prepare.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	*Version*	*Date*
Application	1	24 July 2006
Investigator CV		23 July 2006
Protocol	1	23 July 2006
Covering Letter		12 October 2006
Questionnaire: Non-validated questionnaire - Thesis Research Project Questionnaire Two	1	23 July 2006
Questionnaire: Non-validated questionnaire - Thesis Research Project Questionnaire One	1	23 July 2006
Questionnaire: Questionnaire Two	2	09 October 2006
Questionnaire: Questionnaire One	2	09 October 2006
Letter of invitation to participant	1	23 July 2006
Participant Consent Form	1	09 October 2006
Response to Request for Further Information		
Letter of indemnity insurance	1	28 May 2006
Statement of indemnity arrangements		20 July 2006
Summary CV for Supervisor (Student Research)		23 July 2006

Research governance approval

The study should not commence at any NHS site until the local Principal Investigator has obtained final research governance approval from the R&D Department for the relevant NHS care organisation.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

Please quote this number on all correspondence

With the Committee's best wishes for the success of this project

Yours sincerely

Chair

Enclosures: *Standard approval conditions*

Copy to: [R&D Department for NHS

Appendix Two: Part One – Letter granting research and design approval

PLEASE NOTE: ALL LOGOS AND NAMES HAVE BEEN REMOVED TO PROTECT CONFIDENTIALITY

Date 13/07/07
Ethics Ref
R & D Ref

Enquiries to
Extension
Direct Line

Dear

Re: An investigation into care staff knowledge of the concept of learning disability and to whether a training package can alter any deficits in this knowledge.

Thank you very much for sending all relevant documentation. I am pleased to confirm that the project is now registered with the NHS Research & Development Office. The project has R & D Management Approval to proceed locally.

Please note that if there are any other researchers taking part in the project that are not named on the original Ethics application, please advise the Ethics Committee in writing and copy the letter to us so that we may amend our records and assess any additional costs.

Wishing you every success with your research

Yours sincerely

Data Co-ordinator

Appendix Three: Part One – Letter of invitation to training

PLEASE NOTE: ALL LOGOS AND NAMES HAVE BEEN REMOVED TO PROTECT CONFIDENTIALITY – AS A RESULT ONLY THE BODY OF THE LETTER HAS BEEN INCLUDED

Dear Service Provider

Re: FREE TRAINING DAY

We would like to raise your awareness of a research project due to be ran in the XXXXX Area by XXXXX, a Trainee Clinical Psychologist on placement with the Community Learning Disability Team. This research will focus on whether training can help to develop staff member's concept of learning disability.

We would therefore like to invite members of your staff team to attend a one day training course, ran by XXXXXX, examining the concept of Learning Disabilities and its associated difficulties. This course is aimed at staff of *all levels of experience.*

All staff who choose to attend will be requested to fill out questionnaires assessing their knowledge of the concept of learning disability both before and immediately after the training. Approximately one month after the training another questionnaire and a stamped addressed envelope will be sent to attendees to again assess their knowledge of the concept of learning disability. Individual staff members results will be used for the research only and will not be fed back to any workplace. However, should organisations be interested in the *overall* findings of the study then it will be possible to give them a short overall summery once XXXXX has submitted her research for marking. Please also note it is XXXXXX intention to write a paper on the overall results of the project for submission to a Learning Disability journal.

Places on the training course are limited and are on a strictly first come first served basis. The training is free so staff are requested to provide their own lunch and snacks, however tea and coffee will be made available for a nominal price.

The dates and venues identified for the training are as follows:

Date	Time	Venue
4th Oct 2007	9.30 – 16.30	Details removed to maintain confidentiality
11th Oct 2007	9.30 – 16.30	
12th Oct 2007	9.30 – 16.30	
18th Oct 2007	9.30 – 16.30	
19th Oct 2007	9.30 – 16.30	

25th Oct 2007	9.30 – 16.30
26th Oct 2007	9.30 – 16.30
8th Nov 2007	9.30 – 16.30
9th Nov 2007	9.30 – 16.30
30th Nov 2007	9.30 – 16.30
7th Dec 2007	9.30 – 16.30
14th Dec 2007	9.30 – 16.30
7th Jan 2007	9.30 – 16.30
11th Jan 2007	9.30 – 16.30
17th Jan 2007	9.30 – 16.30
18th Jan 2007	9.30 – 16.30

If you would like to book a place on one of these days then please contact XXXX or XXXX (Clinical Psychology Secretaries) on the following number XXXXXX.

Please find enclosed a poster for your notice board advertising this training, We would request that you also put this letter up on the notice board so that any staff members interested can clearly see that the training is being given as part of a research project.

Yours sincerely,

(Details removed to protect confidentiality)

Appendix Four: Poster advertising training

ALL IDENTIFYING DETAILS HAVE BEEN REMOVED TO PROTECT CONFIDENTIALITY

The Community Learning Disability Team
Department of Clinical Psychology would like
to invite you to a free training day on

UNDERSTANDING THE CONCEPT OF LEARNING DISABILITY

This is a one day training programme aimed at staff of all experience levels examining what is a learning disability, the different levels of learning disability and the effect that a learning disability has on attention, perception, time perception, short-term memory, comprehension and expression. It will also include an element of how to translate these difficulties into day-to-day practice.

If you would like to book a place on this course then please contact XXXX or XXXX on XXXXX for details of dates, times and venues. Places are on a strictly first come, first served basis so book early to avoid disappointment

NB: this training course is being offered as part of a departmental research project. Due to this anyone attending the training will be asked to fill out three questionnaires. Two questionnaires would be completed during the training and the final questionnaire would be sent out and returned by mail one month later. If you are interested in attending the training programme and therefore taking part in the study then please see the accompanying letter for further details.

Appendix Five: Part One – Participant consent form

PLEASE NOTE: ALL LOGOS HAVE BEEN REMOVED TO PROTECT CONFIDENTIALITY

Thesis Research Project Consent form

I (*please print name*) _____ agree to take part in this study which examines whether training can help to develop a carer's concept of learning disability.

I understand that participation in the study involves attending a training day and filling out three questionnaires. Two of these questionnaires will be submitted on the training day and the third will be sent to me and can be returned by mail.

I understand that I can withdraw from the study at any time and I do not have to give a reason for this withdrawal. I am able to withdraw by leaving the training venue. I am aware that I do not have to answer any questions that I do not want to answer.

I agree to any information written on my submitted questionnaires being used for the purposes of this study. I am aware that once my three questionnaires have been linked together, all of my identifying details will be made anonymous. I am aware that NO feedback regarding my individual result will be given to anyone who requests it.

I am aware that the data for this study will be made anonymous and written up for a thesis. The thesis will be submitted to the University for examination. I am also aware that the researcher intends to write a paper for submission to a scientific journal based on the thesis and anonymous data.

PLEASE TURN OVER AND SIGN TO SAY THAT YOU HAVE READ THIS FORM

PLEASE DO NOT FORGET TO INDICATE WHETHER YOU WISH TO PARTICIPATE IN THIS STUDY

PARTICIPANT

I understand the conditions outlined overleaf.

I agree/do not agree (delete as appropriate) to take part in this study.

Signed: _____
Date: _____

RESEARCHER

I have noted and acted in accordance with the above participant's decision to take part in/withdraw from this study.

Signed: _____
Date: _____

Appendix Six: Questionnaire one

PLEASE NOTE: ALL LOGOS AND NAMES HAVE BEEN REMOVED TO PROTECT CONFIDENTIALITY

Thesis Research Project Questionnaire One

Please would you take some time to fill out the following questionnaire to help me with my university research project? When completed, please hand it in to one of the trainers.

It will only take a few minutes to complete. Do not worry if you are unsure of what to write – have a go. Answer to the best of your ability and please do not consult a textbook or ask someone else what they think the answers are. *Please note all answers are confidential and your scores will be made anonymous when you have submitted all of the questionnaires.* The **only** person who will see any results paired with your name will be XXXXX, the principle researcher.

SECTION ONE: A BIT ABOUT YOURSELF

Please note – all answers given in this section will be treated in the strictest of confidence and will only be used in broad categories to analyse overall scores. You have been asked to give your name so that all of your questionnaires can be linked together for scoring. As soon as this has been done, your name will be removed from the questionnaires. You do not have to answer any questions you do not want to.

1.What is your name?

_____

2. What is your job title?

_____

3. Which Care Provider do you work for?

_____

4. How long have you worked with clients with a learning disability?
_____ years _____ months

5. Have you previously attended a course provided by the CLDT Department of Clinical Psychology that has examined 'the definition and components required for diagnosis of a learning disability'? (Please circle)

YES / NO

SECTION TWO: TRAINING CONCEPTS

Please do not consult with anyone else or look at any books or handouts when answering these questions. Thinking about clients that you work with may help you to answer these questions.

1. What is a 'learning disability?'

2. What is 'attention?'

3. How would difficulties with attention impact on a client's day-to-day functioning?

4. What strategies/techniques could you use to help a client compensate for difficulties with attention?

5. What is 'perception?'

6. How would difficulties with perception impact on a client's day-to-day functioning?

7. What strategies/techniques could you use to help a client compensate for difficulties with perception?

8. What is 'time-perception?'

9. How would difficulties with time-perception impact on a client's day-to-day functioning?

10. What strategies/techniques could you use to help a client compensate for difficulties with time-perception?

11. What is 'short-term memory?'

12. How would difficulties with short-term memory impact on a client's day-to-day functioning?

13. What strategies/techniques could you use to help a client compensate for difficulties with short-term memory?

14. What is 'comprehension?'

15. How would difficulties with comprehension impact on a client's day-to-day functioning?

16. What strategies/techniques could you use to help a client compensate for difficulties with comprehension?

17. What is 'expression?'

_____
_____
_____

18. How would difficulties with expression impact on a client's day-to-day functioning?

_____
_____
_____

19. What strategies/techniques could you use to help a client compensate for difficulties with expression?

_____
_____
_____

Appendix Seven: Questionnaire two

PLEASE NOTE: ALL LOGOS AND NAMES HAVE BEEN REMOVED TO PROTECT CONFIDENTIALITY

Thesis Research Project Questionnaire Two

Name _____
Date _____

(Please note – your name is being used to link all of your questionnaires together. As soon as this has been done your scores will be made anonymous. Only XXXXXX will see your answers when they are linked to your name). Remember – you do not have to answer any questions you do not want to.

SECTION ONE: TRAINING CONCEPTS

Think about the 'understanding learning disability' course ran by XXXXXX (Trainee Clinical Psychologist) and try to answer the following questions. Please do not consult with anyone else or look at any books or handouts when answering these questions. Thinking about clients that you work with may help you answer these questions.

1. What is a 'learning disability?'

_____
_____
_____

2. What is 'attention?'

_____
_____
_____

3. How would difficulties with attention impact on a client's day-to-day functioning?

_____
_____
_____

4. What strategies/techniques could you use to help a client compensate for difficulties with attention?

_____
_____
_____

5. What is 'perception?'

_____

6. How would difficulties with perception impact on a client's day-to-day functioning?

7. What strategies/techniques could you use to help a client compensate for difficulties with perception?

8. What is 'time-perception?'

9. How would difficulties with time-perception impact on a client's day-to-day functioning?

10. What strategies/techniques could you use to help a client compensate for difficulties with time-perception?

11. What is 'short-term memory?'

12. How would difficulties with short-term memory impact on a client's day-to-day functioning?

13. What strategies/techniques could you use to help a client compensate for difficulties with short-term memory?

14. What is 'comprehension?'

_____
_____
_____

15. How would difficulties with comprehension impact on a client's day-to-day functioning?

_____
_____
_____

16. What strategies/techniques could you use to help a client compensate for difficulties with comprehension?

_____
_____
_____

17. What is 'expression?'

_____
_____
_____

18. How would difficulties with expression impact on a client's day-to-day functioning?

_____
_____
_____

19. What strategies/techniques could you use to help a client compensate for difficulties with expression?

_____
_____
_____

Appendix Eight: Certificate of attendance

THE SIGNATURE BLOCKS HAVE BEEN REMOVED TO PROTECT CONFIDENTIALITY

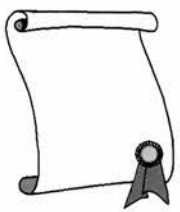
CERTIFICATE OF ATTENDANCE

This is to certify that

.....

attended a training course run by the Department of Clinical Psychology
(Learning Disability Services)

Course Title: 'Understanding the concept of Learning Disabilities'
Date: XXXXXX



Appendix Nine: Scoring system

Scoring System

WHAT IS A LEARNING DISABILITY?

A score of 0-3 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Difficulties with *Intellectual functioning/ IQ* (World Health Organisation, 1992)	For any answer that highlights the concept of the sufferer having reduced level of cognitive capacity, IQ or intelligence (World Health Organisation, 1992).	"A low IQ" (P3 Q2) "Difficulty with cognition" (P26 Q1) "An IQ of under 70" (P26 Q3)
Difficulties with *adaptive* functioning (World Health Organisation, 1992)	For any concept that recognises either an impairment of adaptive functioning or daily living or that the individual requires some form of help in these areas (Emerson, 2001; World Health Organisation, 1992).	"A lack in a certain area – to be able to cope in everyday live" (P1 Q1) "Reduced ability to cope independently" (P2 Q2) "Someone who needs help with day to day things in life" (P21 Q1)
Difficulties *starting in childhood* (World Health Organisation, 1992)	The onset occurred in childhood (before 18 years of age) (Luckasson *et al.,* 1992). Or, that the individual did not meet developmental milestones (Emerson, 2001; World Health Organisation, 1992).	"Happens prior to being 18" (P3 Q2) "… acquired in the learning stages of life (before 18)" (P12 Q2) "A disability from childhood resulting from a brain injury or the brain not developing properly" (P16 Q2)

WHAT IS ATTENTION?

A score of 0 – 2 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Attention *focusing* on something (MacKinnon *et al.* 2004).	Attention focuses the mind on what is occurring E.g. an event or task (MacKinnon *et al.* 2004; Gross, 2005; Wood *et al.* 2006).	"Concentration" (P31 Q1) "Focus on self or what's happening" (P32 Q1) "The ability to tune in" (P3 Q2)
Attention selects *the most important thing* and focuses on it (MacKinnon *et al.* 2004).	Attention selects what is the most important thing occurring and ignores what is not important (MacKinnon *et al.* 2004; Gross, 2005)	"Ability to focus on what is important at a particular time" (P30 Q1) "Ability to tune in to what's important at the time" (P3 Q2) "Ability to focus on the most appropriate stimuli" (P12 Q2)

HOW WOULD DIFFICULTIES WITH ATTENTION IMPACT ON A CLIENT'S DAY-TO-DAY FUNCTIONING?

A score of 0 – 3 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Problems *following instructions* (MacKinnon *et al.* 2004).	Experiencing problems following instructions (MacKinnon *et al.* 2004) or engaging in tasks (Martin *et al.* 2007).	"Would affect their ability to carry out tasks" (P10 Q2) "Would not … be able to comply" (P13 Q1) "Difficult to complete tasks" (P26 Q3)
Problems *remaining focused* or being *distracted* (MacKinnon *et al.* 2004).	Problems focusing on the most important thing (Lezak *et al.* 2004; Emerson *et al.* 1998), or problems with keeping concentration, losing concentration or coming 'off task' easily (MacKinnon *et al.* 2004).	"Can't focus on what they are doing" (P22 Q1) "Inability to follow through a task, diverting…" (P42 Q2) "Not able to concentrate on the task" (P46 Q2)
Confusion (MacKinnon *et al.* 2004).	Behaving or appearing confused, tired, dazed or as if they do not know what is happening (MacKinnon *et al.* 2004; Howieson and Lezak 2002, Lezak *et al.* 2004).	"Possibility of confusion" (Q36 P1) "Not understanding" (Q35 P2) "Confusion, uncertainty…" (Q28 P1)

WHAT STRATEGIES/TECHNIQUES COULD YOU USE TO HELP A CLIENT COMPENSATE FOR DIFFICULTIES WITH ATTENTION?

A score of 0 – 4 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Reducing distractions (MacKinnon *et al.* 2004)	Reducing the number of distractions (MacKinnon *et al.* 2004) or avoiding environments that might overwhelm the person (Powell & Rita, 1997)	"Cut down on interference" (P2 Q2) "Limit what is going on around them" (P3 Q2) "Removing stimulus/distractions" (P4 Q2)
Looking at the person (MacKinnon *et al.* 2004)	Looking at the person (MacKinnon *et al.* 2004) or giving them eye-contact (NHS Quality Improvement Scotland, 2006)	"Eye contact" (P2 Q2) "… Look at them…" (P12 Q2) "Look at them while you are talking" (P24 Q2)
Using the *person's name* (MacKinnon *et al.* 2004)	Using their name before talking to catch their attention (MacKinnon *et al.* 2004)	"Say their name" (P1 Q2) "Call the person by their name" (P5 Q2) "Address person by their name" (P12 Q2)
Emphasising what the client needs to focus on (MacKinnon *et al.* 2004)	Emphasising what should be focused E.g. using cues and objects or pictures (MacKinnon *et al.* 2004; NHS Quality Improvement Scotland, 2006)	"Use visual aids, sign language etc" (P1 Q2) "Use boards to show daily/weekly planners" (P5 Q2) "… showing them pictures…" (P14 Q1)

WHAT IS PERCEPTION?

A score of 0 – 1 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Understanding *sensory* information (MacKinnon *et al.* 2004)	Understanding sensory information (MacKinnon *et al.* 2004; Gross, 2005)	"How people see, hear, taste the things around us" (P22 Q2)

HOW WOULD DIFFICULTIES WITH PERCEPTION IMPACT ON A CLIENT'S DAY-TO-DAY FUNCTIONING?

A score of 0 – 3 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Problems understanding information due *inadequate experience* (MacKinnon *et al.* 2004).	Lacking experience to understand sensory information causing difficulties with understanding (MacKinnon *et al.* 2004; Lezak *et al.* 2004).	"It would effect them if they were to perceive something a different way from most… and not understand a situation" (P4 Q2)
Problems *integrating* sensory information (MacKinnon *et al.* 2004)	A lack of ability to integrate or to cope with sensory information (Powell & Rita, 1997; Emerson *et al.* 1999; MacKinnon *et al.* 2004)	"Competing senses e.g. sounds, sights; disallowing to concentrate on one… function at a time" (P17 Q2)
Problems understanding sensory information as a result of *an additional disability* (MacKinnon *et al.* 2004)	Having a sensory impairment or problems understanding sensory information due to sensory disability (MacKinnon *et al.* 2004; Powell & Rita, 1997)	"If a problem with the senses then the whole picture of a situation may not be understood" (P26 Q3) "… People don't understand properly due to lack of… sight etc" (P25 Q2)

WHAT STRATEGIES/TECHNIQUES COULD YOU USE TO HELP A CLIENT COMPENSATE FOR DIFFICULTIES WITH PERCEPTION?

A score of 0 – 2 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Giving the *information in more than one* way (MacKinnon *et al.* 2004)	Using additional senses to facilitate understanding (MacKinnon *et al.* 2004).	"Using sign language, pictures etc" (P1 Q2) "… Reinforce with visual aids/ gestures" (P4 Q2) "Using sight, smell, taste to explain what things are" (P26 Q2)
Building experience (MacKinnon *et al.* 2004).	Having the opportunity to build experience or being in an environment that is full of opportunities to learn (MacKinnon *et al.* 2004; Emerson *et al.* 1998).	"Build on familiarity and recognisable things" (P2 Q2)

WHAT IS TIME PERCEPTION?

A score of 0 – 1 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Understanding *time words* or *intervals of time* (MacKinnon *et al.* 2004)	Understanding time using language such as seconds, minutes etc... (MacKinnon *et al.* 2004; Owen & Wilson, 2006) or understanding *lengths* of time such as half-an-hour etc (MacKinnon *et al.* 2004; Owen & Wilson, 2006).	"An understanding of the concept of time in days, hours etc" (P36 Q2) "The ability to understand time in terms of days, hours, previous happenings, minutes" (P27 Q3) "A sense of how long is an hour or a week" (P36 Q2)

HOW WOULD DIFFICULTIES WITH TIME PERCEPTION IMPACT ON A CLIENT'S DAY-TO-DAY FUNCTIONING?

A score of 0 – 4 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Problems *understanding when* (MacKinnon *et al. 2004)*	Being unable to understand when an event is going to occur (MacKinnon *et al.* 2004; Owen & Wilson, 2006).	They could think its time for bed and it wasn't, their day would be muddled up (P8 Q2) "Unable to carry things out at a particular time" (P10 Q1) "May not understand when things are happening" (P13 Q3)
Problems *coping with change* to routine (MacKinnon *et al.* 2004*)*	Being unable to cope with changes to their schedule (MacKinnon *et al.* 2004; Owen & Wilson, 2006).	"If something changed, might not get up etc..." (P9 Q2) "Could be confused if things didn't run to the routine they were used to" (P3 Q2)
Problems coping with information *given either too far in advance or with too little time* to adapt (MacKinnon *et al.* 2004)	Being unable to cope, when told about an something either too early or with too little notice (MacKinnon *et al.* 2004; Morgan, 1996).	"May expect things to happen sooner or later" (P12 Q2) "... Not understanding that they [*events*] wont happen now but in a week" (P26 Q2) "expecting things to happen when its not yet time to do it or celebrate" (P26 Q3)
Repetitive questioning about when or *if* an event is going to occur (MacKinnon *et al.* 2004.	Repetitively seeking reassurance about when an something is happening (MacKinnon *et al.* 2004; Jones & Morgan, 1999).	"Maybe cause the person to repeat question things, e.g. when they were going out, when lunch was etc" (P3 Q3)

WHAT STRATEGIES/TECHNIQUES COULD YOU USE TO HELP A CLIENT COMPENSATE FOR DIFFICULTIES WITH TIME PERCEPTION?

A score of 0 – 3 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Using objects to help the individual understand time (MacKinnon *et al.* 2004)	Using diaries, timetables, symbols, signing etc to display time (MacKinnon *et al.* 2004; Owen & Wilson, 2006).	"Board made up with pictures for their day-to-day routine (time schedule… calendars and diaries can also be used" (P39 Q2) "By using signs, symbols or calendar to help them understand in terms of time or 'when'" (P27 Q3) "Use visual aids such as calendars/diaries for the client and refer to it as needed" (P15 Q2)
Using events to help the client understand time (MacKinnon *et al.* 2004)	Using regular events to help the client orientate themselves to time (MacKinnon *et al.* 2004; Emerson *et al.* 1999).	"Tell them i.e. after a certain program – Coronation Street, this is going to happen" (P38 Q2) "Say 'after dinner…'" (P26 Q3) "Use key times of the day e.g. after tea we get ready to go to the dance" (P16 Q2)
Using simple language to convey time (MacKinnon *et al.* 2004).	Using simple language to explain when something is happening rather than using specific time words (MacKinnon *et al.* 2004; NHS Quality Improvement Scotland, 2006).	"… Talk about the amount of sleeps" (P25 Q2) "Say 'in two sleeps' or 'that's the day you go to football'" (P26 Q3) "Do not use references such as tomorrow or next week, instead use things they understand such as 'sleeps' or 'after lunch'" (P18 Q2)

WHAT IS SHORT-TERM MEMORY?

A score of 0 – 2 can be obtained.

Concept	Score 1 point	Sample Correct Answers
It holds information for *a short time* (MacKinnon et al)	Short-term memory only keeps information for a short period of time (MacKinnon *et al.* 2004; Martin *et al.* 2007).	"Remembering things that have happened very recently" (P1 Q1) "A memory that lasts for only 30 seconds…" (P2 Q2) "The ability to remember things that have just occurred" (P4 Q2)
It only holds a *small amount* of information (MacKinnon *et al.* 2004)	Short-term memory can only hold limited information (MacKinnon *et al.* 2004; Martin *et al.* 2007).	"They can only remember a little at a time…" (P29 Q2)

HOW WOULD DIFFICULTIES WITH SHORT-TERM MEMORY IMPACT ON A CLIENT'S DAY-TO-DAY FUNCTIONING?

A score of 0 – 3 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Problems *remembering what is being done* or has happened (MacKinnon *et al.* 2004)	Forgetting an instruction or activity and therefore not completing it or doing something else (MacKinnon *et al.* 2004), or forgetting what has occurred (Gross, 2005).	"Unable to remember instructions for carrying out basic tasks" (P1 Q1) "Clients could forget what they had just done and what they were about to do and why" (P5 Q2) "A client may not remember what they have been told or what they are doing or about to do" (P13 Q3)
Repetitive talking due to *memory failure* (MacKinnon *et al.* 2004).	Being repetitive due to memory failure i.e. repetitively talking about something because they have forgotten that it is going to occur (MacKinnon *et al.* 2004; Howlin, 1997).	"Forgetting what has been asked, constantly repeating the same questions" (P4 Q2) "Asking same questions" (P19 Q2)
Short-term memory being reduced as a result of *information overload* (MacKinnon *et al.* 2004).	Short-term memory worsening if too much is occurring at once (MacKinnon *et al.* 2004; Butler & Hope, 1995).	"They would have difficulty coping with too much information…" (P2 Q2)

WHAT STRATEGIES/TECHNIQUES COULD YOU USE TO HELP A CLIENT COMPENSATE FOR DIFFICULTIES WITH SHORT-TERM MEMORY?

A score of 0 – 2 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Limit information (MacKinnon *et al.* 2004)	Giving a small amount of information (MacKinnon *et al.* 2004; Butler & Hope, 1995).	"Give simple commands, one at a time" (P31 Q2) "Tell them short sentences when giving instructions" (P33 Q2) "Simple instructions, one instruction at a time" (P36 Q2)
Using *cues* etc to help the client remember (MacKinnon *et al.* 2004)	Using cues, prompts and objects to help the client remember (MacKinnon *et al.* 2004; Powell & Rita, 1997)	"By showing them pictures that would enable them to remember" (P27 Q2) "Leave prompts or reminders" (P31 Q2) "Cues" (P36 Q2)

WHAT IS COMPREHENSION?

A score of 0 – 1 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Understanding *what has been communicated* (MacKinnon *et al.* 2004)	Understanding what another person is trying to communicate such as a message or what has been said (MacKinnon *et al.* 2004; Kelly, 2000; Crystal & Varley, 1998).	"Being able to understand something" (P1 Q1) "Understanding communication, verbal, written instructions etc" (P5 Q2) "Comprehension is understanding" (P18 Q1)

HOW WOULD DIFFICULTIES WITH COMPREHENSION IMPACT ON A CLIENT'S DAY-TO-DAY FUNCTIONING?

A score of 0 – 4 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Giving a *wrong reply* (MacKinnon *et al.* 2004)	Giving the wrong reply or saying or going to do an activity other than is expected as a result of a misunderstanding (MacKinnon *et al.* 2004; Kelly, 2000).	"They could take one word out of a sentence such as 'teatime – means supper' but they could go and make a cup of tea" (P22 Q2) "A wrong response would be given" (P26 Q3) "Doing something completely different from what was expected" (P33 Q2)
Giving *no reply* or appearing difficult (MacKinnon *et al.* 2004)	Giving no reply or appearing to ignore what has been said, withdrawing or appearing stubborn or difficult (MacKinnon *et al.* 2004; Powell & Rita, 1997).	"Perceived lack of intent or unwillingness to participate in certain activities or tasks but they do not comprehend…" (P25 Q2) "Not responding to the question" (P27 Q3) "Have difficulty in actioning anything" (P9 Q2)
Repeating what has been said (MacKinnon *et al.* 2004)	Repeating what has been heard or asking the same questions again and again indicating that they have not understood (MacKinnon *et al.* 2004; Kelly, 2000)	"… repeating, unsure" (P55 Q2)
Confusion (MacKinnon *et al.* 2004)	Becoming confused or muddled *by what has been said* or taking language literally and being unable to understand abstract concepts (MacKinnon *et al.* 2004; Kelly, 2000).	"They wouldn't understand what was being asked of them - confusion" (P26 Q2)

WHAT STRATEGIES/TECHNIQUES COULD YOU USE TO HELP A CLIENT COMPENSATE FOR DIFFICULTIES WITH COMPREHENSION?

A score of 0 – 6 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Slowing down speech (MacKinnon *et al.* 2004)	Slowing the rate or speed of speech (Kelly, 2000) and giving the client time to process any information (MacKinnon *et al.* 2004)	"Speaking slowly" (P3 Q3) "Speak slowly…" (P8 Q2) "Saying the words slower…" (P24 Q2)
Keeping speech *short* (MacKinnon *et al.* 2004)	Reducing the length of sentences (Kelly, 2000) or keeping what is said short (MacKinnon *et al.* 2004; Powell & Rita, 1997)	"Use small chunks of info" (P3 Q3) "Use short sentences" (P5 Q2) "Break down conversations/instructions into small sentences" (P9 Q2)
Using *simple words* (MacKinnon *et al.* 2004)	Reducing the complexity of sentences and words (Kelly, 2000; MacKinnon *et al.* 2004; Powell & Rita, 1997)	"Keep it simple" (P10 Q2) "Use simple language" (P1 Q2) "Keep things simple and to the point" (P16 Q2)
Avoiding abstract terms (MacKinnon *et al.* 2004)	Being specific with language and avoiding abstract language concepts such as negatives, tenses, plurals (Van Dyke *et al.* 1990), time (Howlin, 1997), irony, sarcasm, jokes and metaphors (MacKinnon *et al.* 2004; Kelly, 2000; Powell & Rita, 1997)	"Use words literally" (P13 Q3) "Don't use negatives…" (P17 Q2) "Avoid sarcasm and joking unless you're sure the client understands" (P3 Q2) "Don't use irony or sarcasm" (P17 Q2)
Using *augmentation* (MacKinnon *et al.* 2004)	Using different communication methods such as symbols, signifiers, signing etc to facilitate understanding (MacKinnon *et al.* 2004; Kelly, 2000; Van Dyke *et al.* 1990).	"Gestures, objects…" (P3 Q2) "Gestures and visual aids" (P3 Q3) "Using pictures/gestures etc" (P4 Q2)

Continued…

Concept	Score 1 point	Sample Correct Answers
Repeating when required (MacKinnon *et al.* 2004)	Repeating information, if required, in order to aid understanding (MacKinnon *et al.* 2004; Howlin, 1997)	"Repeating instructions…" (P4 Q2) "Repeating if need be" (P6 Q2) "Repeat using the same simple words" (P36 Q2)

WHAT IS EXPRESSION?

A score of 0 – 2 can be obtained.

Concept	Score 1 point	Sample Correct Answers
The communication of *information to someone else* (MacKinnon *et al.* 2004)	The ability to convey information or an idea to another person *so that it is understood* (MacKinnon *et al.* 2004; Kelly, 2000)	"How they are able to communicate what they want" (P1 Q2) "A skill you use to get a message over to someone" (P2 Q2) "How we show ourselves or are understood by others" (P13 Q3)
This communication can take *many forms* (MacKinnon *et al.* 2004).	Expression takes many forms including speech, facial expression, behaviour, pictures, symbols, gesture, body language etc (MacKinnon *et al.* 2004; Kelly, 2000; Crystal & Varley, 1998).	"… Using body and sign language, facial expression" (P16 Q2) "… By using talking or mime etc" "… What facial, tone of voice, body language we give off" (P22 Q1) (P21 Q3)

HOW WOULD DIFFICULTIES WITH EXPRESSION IMPACT ON A CLIENT'S DAY-TO-DAY FUNCTIONING?

A score of 0 – 3 can be obtained.

Concept	Score 1 point	Sample Correct Answers
The client being *unable to speak* or have *problems making their speech understood* (MacKinnon *et al.* 2004)	The client lacking speech or using speech that is difficult to understand causing problems with communication (MacKinnon *et al.* 2004; Kelly, 2000). This may be a result of the person having a physical disability (Van Dyke *et al.* 1990).	"People may not be able to interpret how a client is feeling or what they need" (P26 Q2) "Not being able to talk or give you signs if you don't understand…" (P24 Q2) "No understanding of what was being needed" (P35 Q2)
Breakdown of relationships *as the result of poor expression* (MacKinnon *et al.* 2004).	The breakdown of relationships with others *as a result of problems with communication* (MacKinnon *et al.* 2004; Kelly, 2000)	"Misunderstanding" (P17 Q2) "Might make relationships difficult" (P13 Q3) "A client may… no express themselves thus having a breakdown in communication" (P6 Q2)
Reduction of independence as a result of difficulties with expression (MacKinnon *et al.* 2004).	The person's independence being reduced because they rely on someone else to help them communicate (MacKinnon *et al.* 2004; Kelly, 2000)	"Restricts ability to deal with aspects of daily life" (P36 Q2) "May not be able to make their views/likes-dislikes known" (P12 Q2)

WHAT STRATEGIES/TECHNIQUES COULD YOU USE TO HELP A CLIENT COMPENSATE FOR DIFFICULTIES WITH EXPRESSION?

A score of 0 – 3 can be obtained.

Concept	Score 1 point	Sample Correct Answers
Knowing how the individual communicates (MacKinnon *et al.* 2004)	Familiarity and use of the client's identified communication style (MacKinnon *et al.* 2004; Kelly, 2000; Carr *et al.* 1994).	"Get advice from others so that you have some idea of what the client is saying" (P36 Q2) "Understand your clients gestures for certain things they like and dislike" (P39 Q2) "Know the person well…" (P3 Q2)
Having reasons to communicate (MacKinnon *et al.* 2004)	Having ready conversation topics i.e. having something to say to the person (MacKinnon *et al.* 2004; Kelly, 2000)	"Find an interest to talk about" (P15 Q2) "Have something to talk about" (P3 Q3)
Using and encouraging the client to use *different communication methods* (MacKinnon *et al.* 2004)	Using and encouraging the client to use different types of communication such as gesture, speech etc (MacKinnon *et al.* 2004; Kelly, 2000; Van Dyke *et al.* 1990).	"Sign language, gestures, mime help if conversational problems" (P17 Q2) "Make it easier for them to use sign language, pictures or symbols to express themselves" (P18 Q2) "Makaton, visual prompts, pictorial timetable etc" (P25 Q2)

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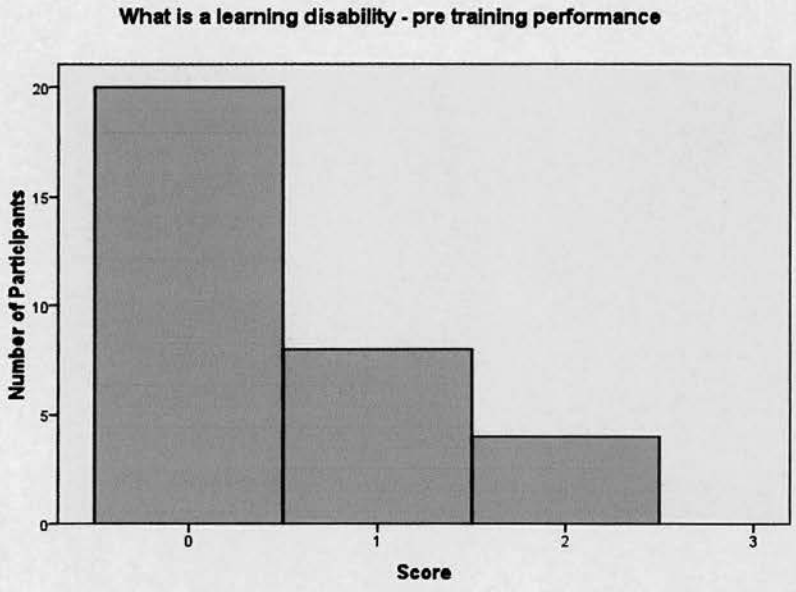
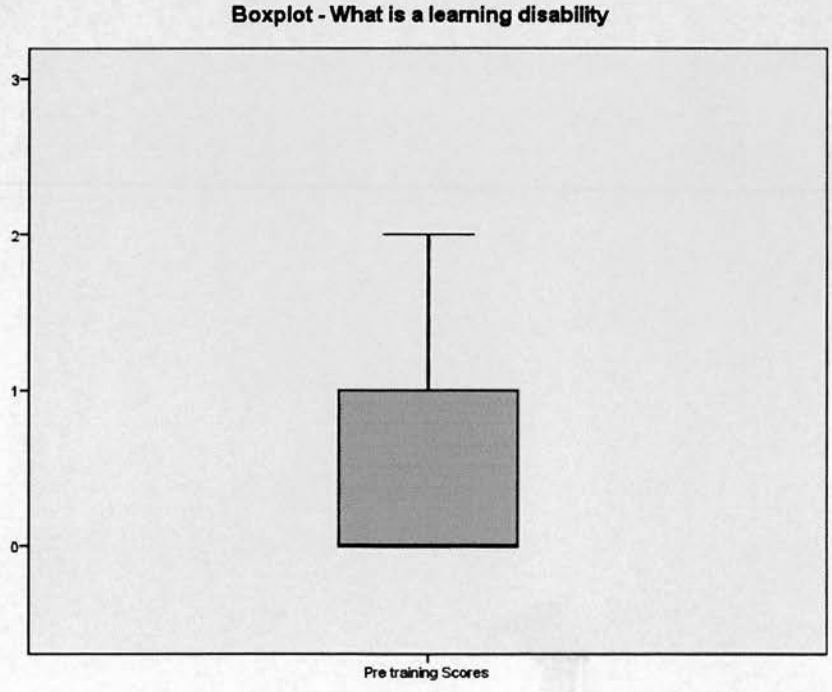
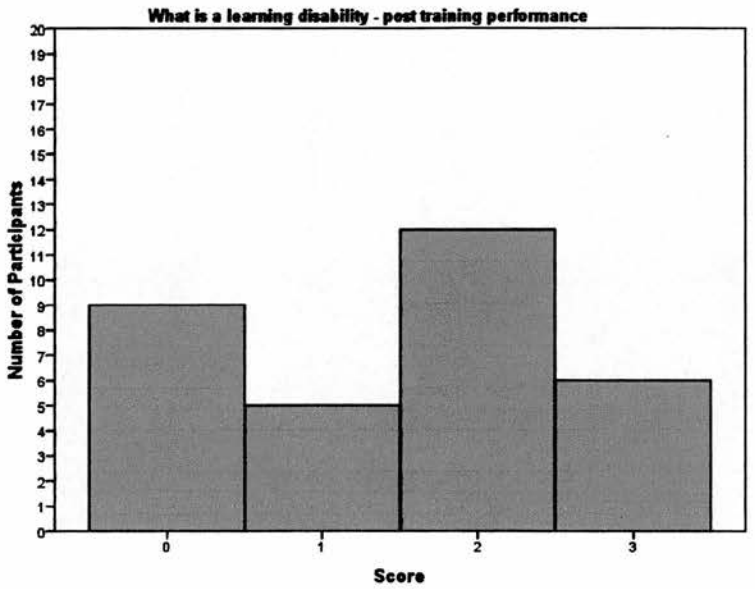
Appendix Ten: Histograms and boxplots

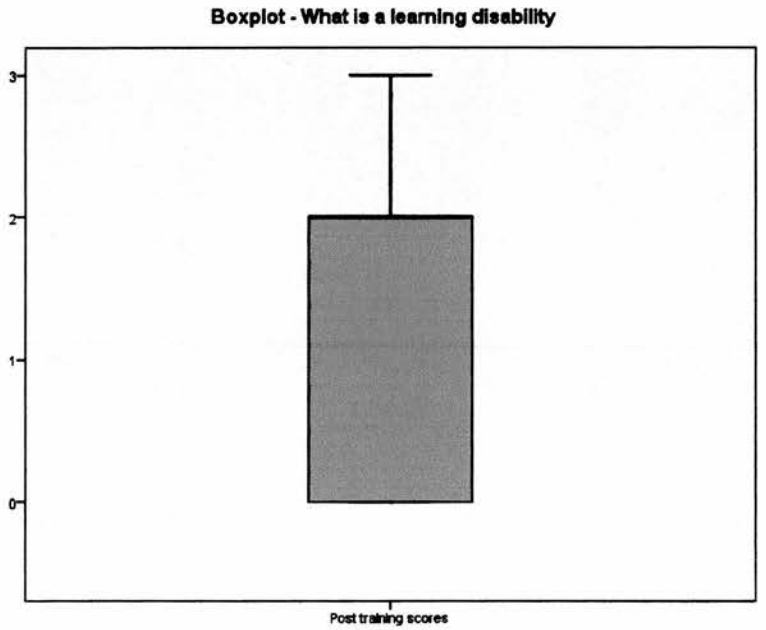
Pre training – what is a LD?



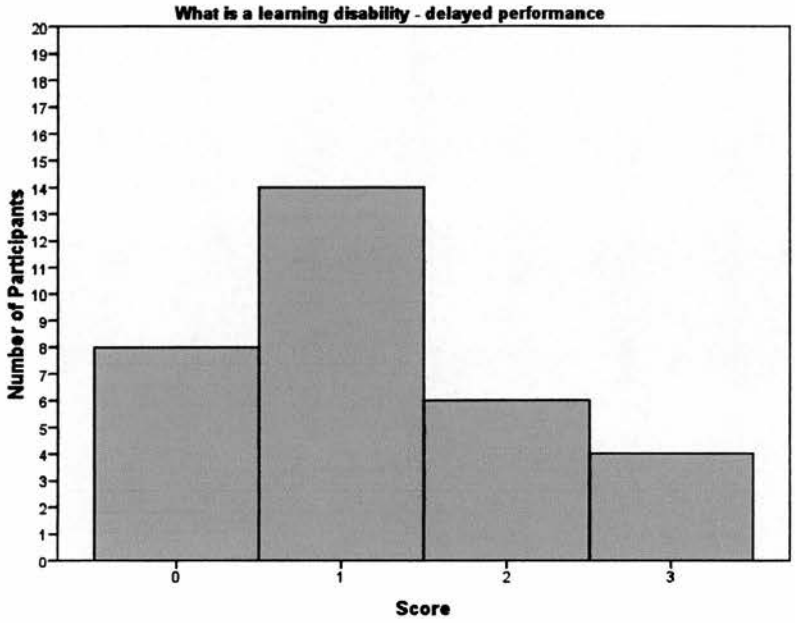


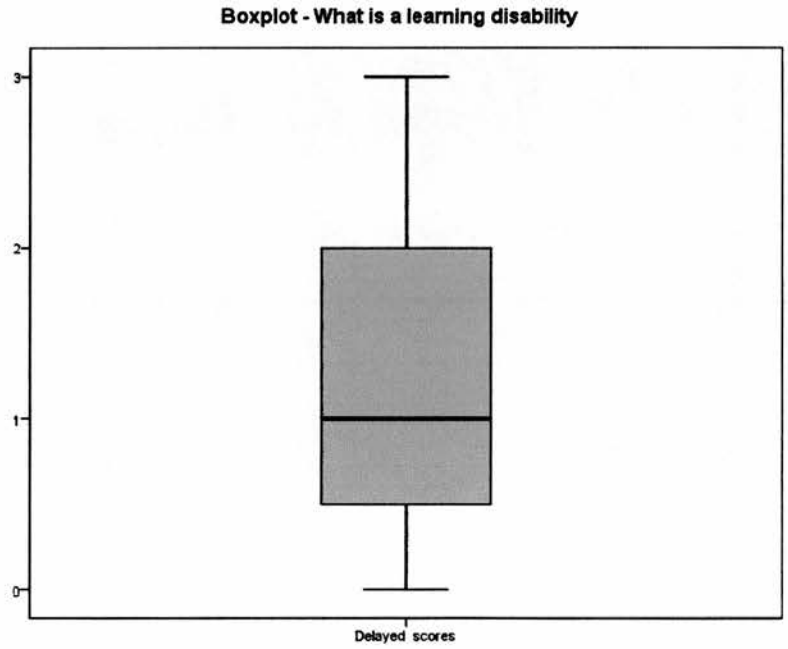
Post training – what is a LD?



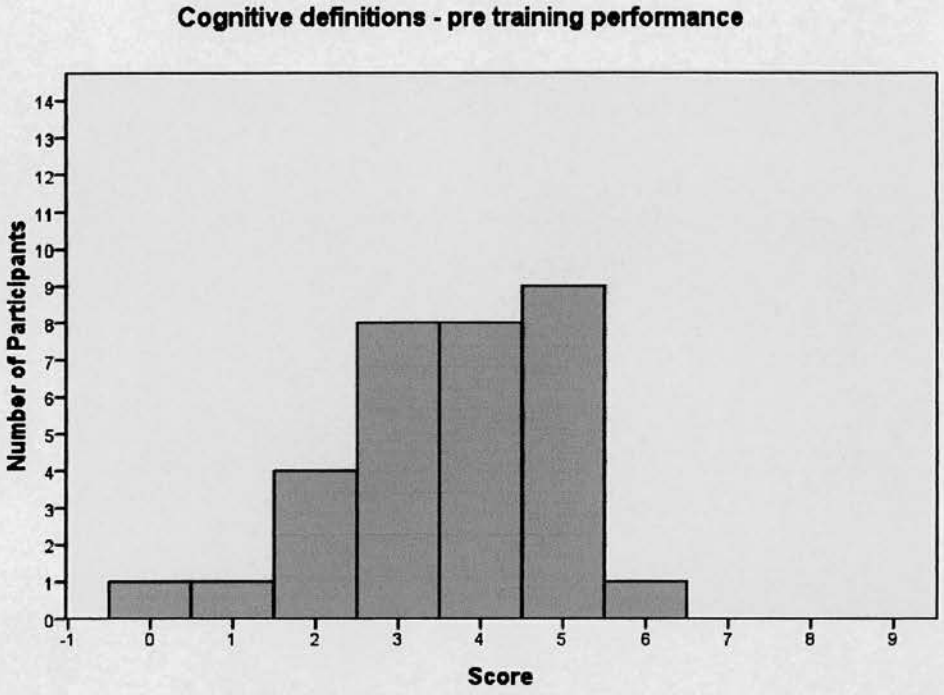


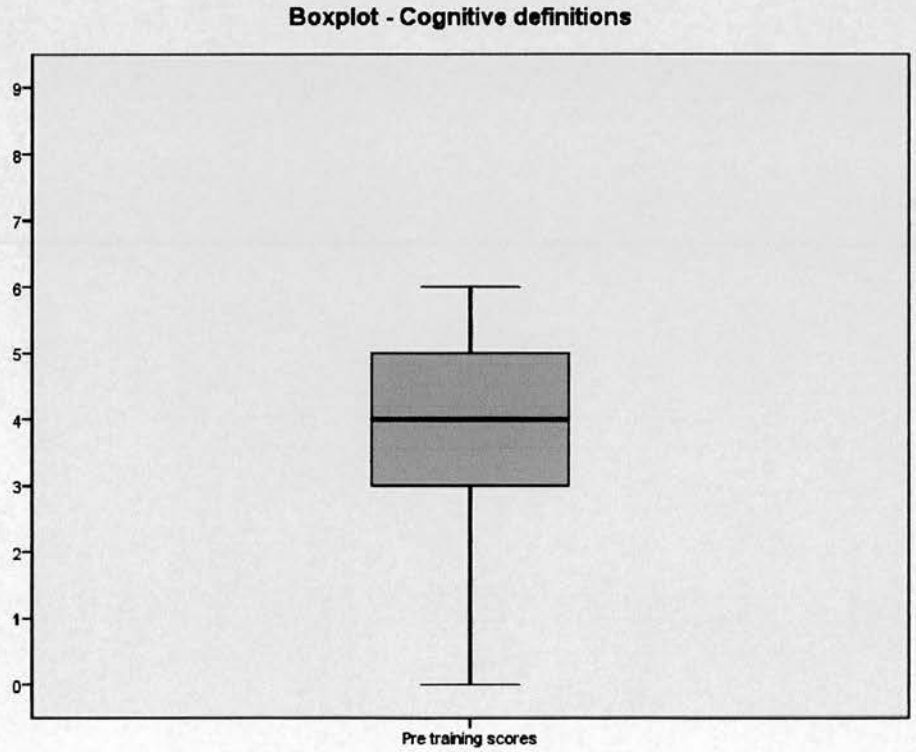
Delay – what is a LD?



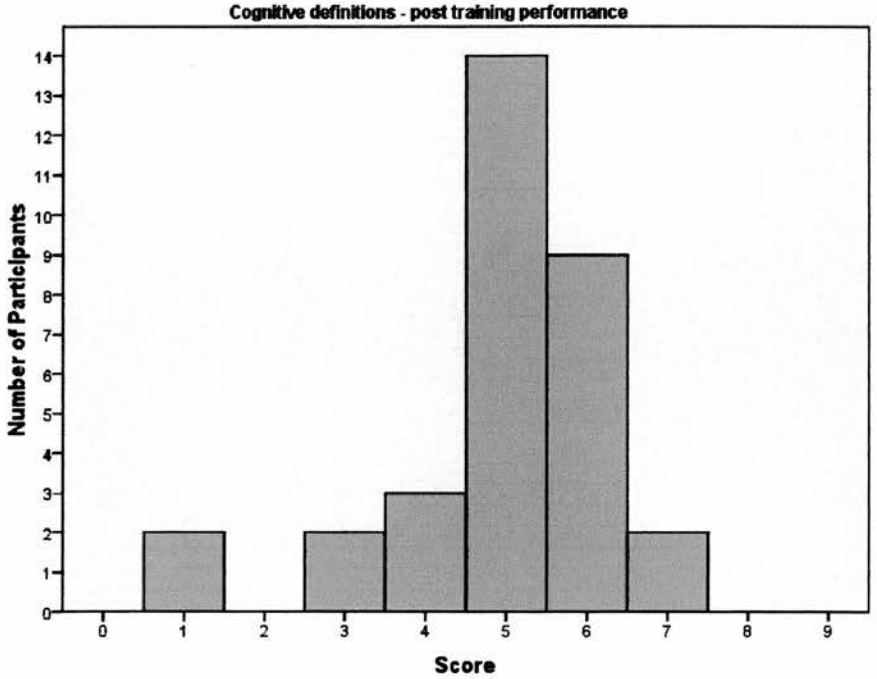


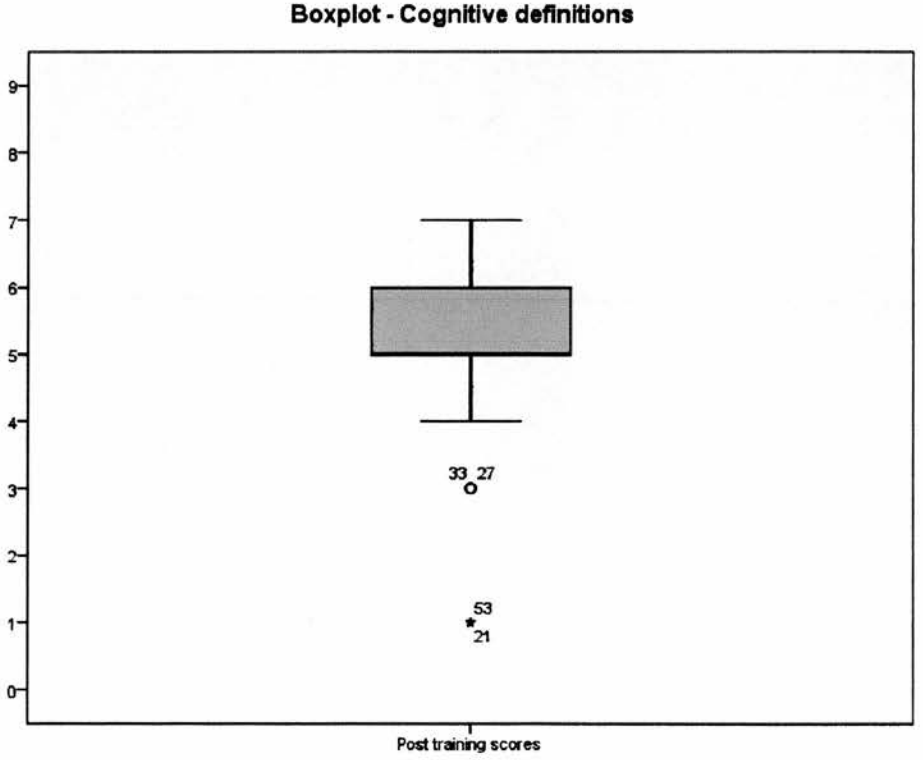
Pre training – cognitive definitions



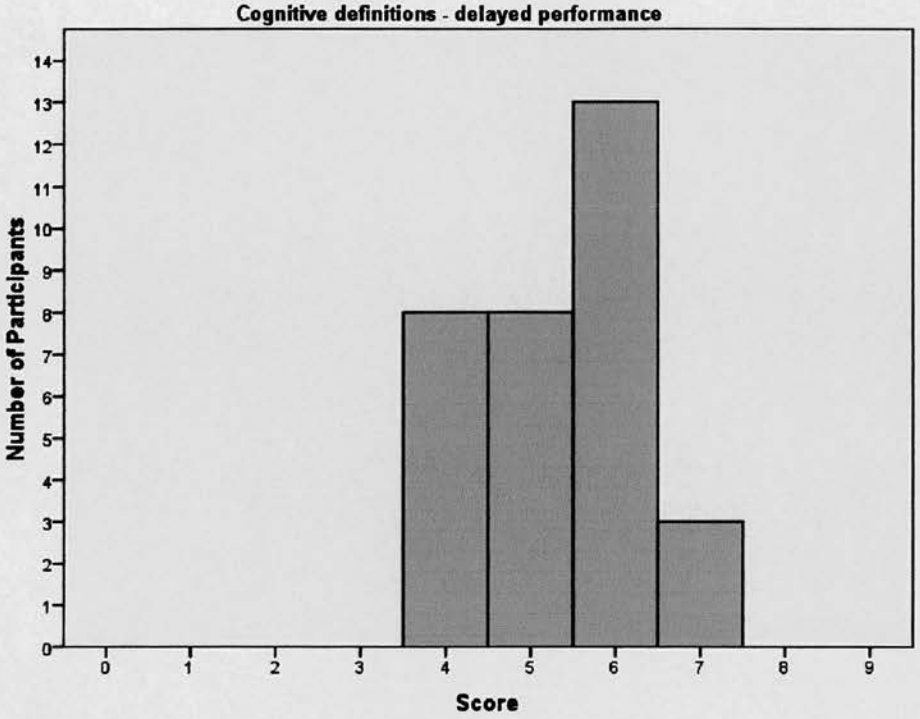


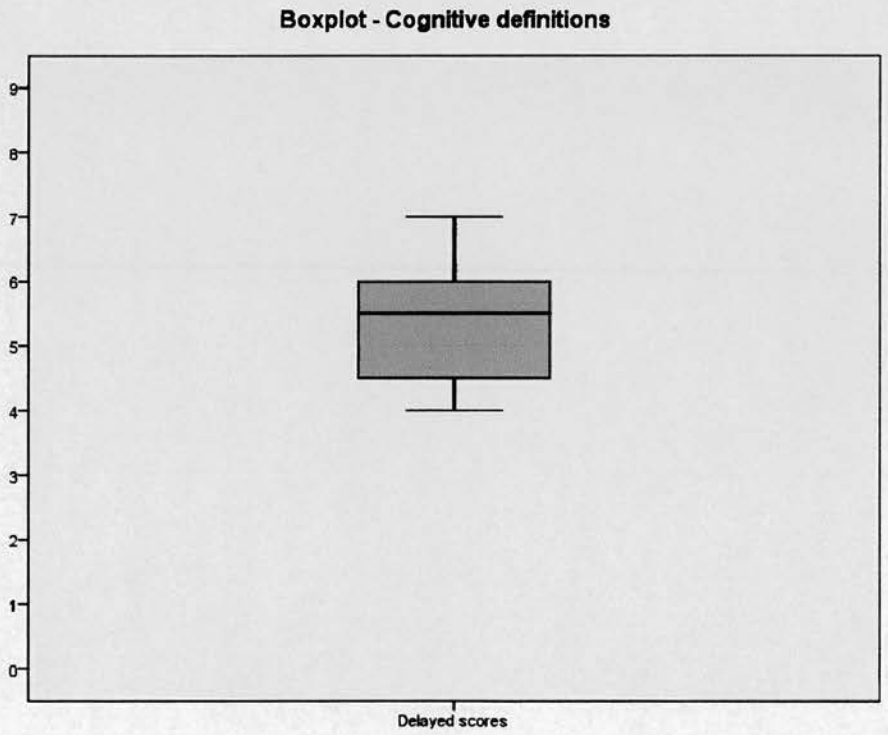
Post training – cognitive definitions



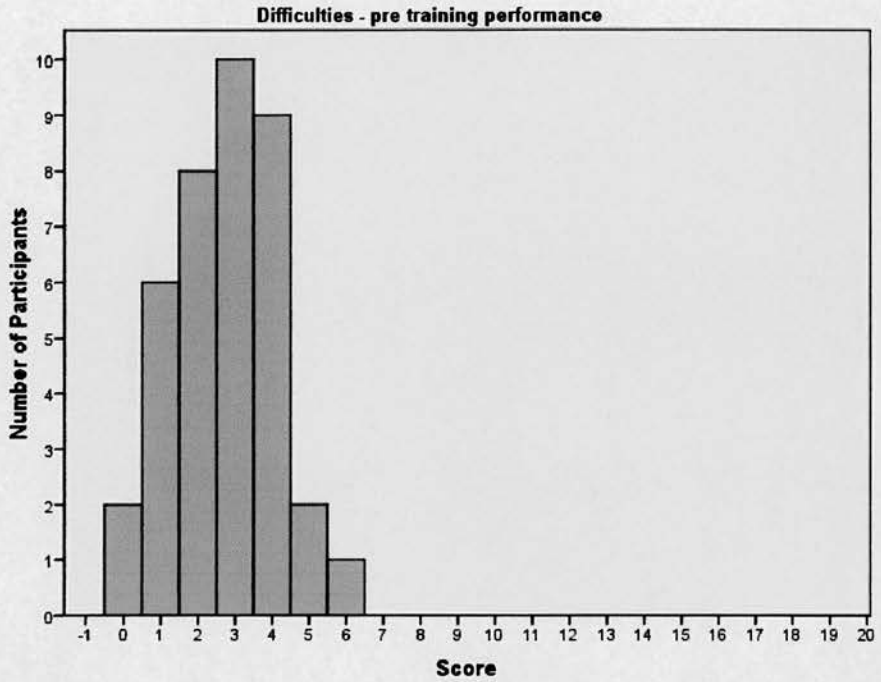


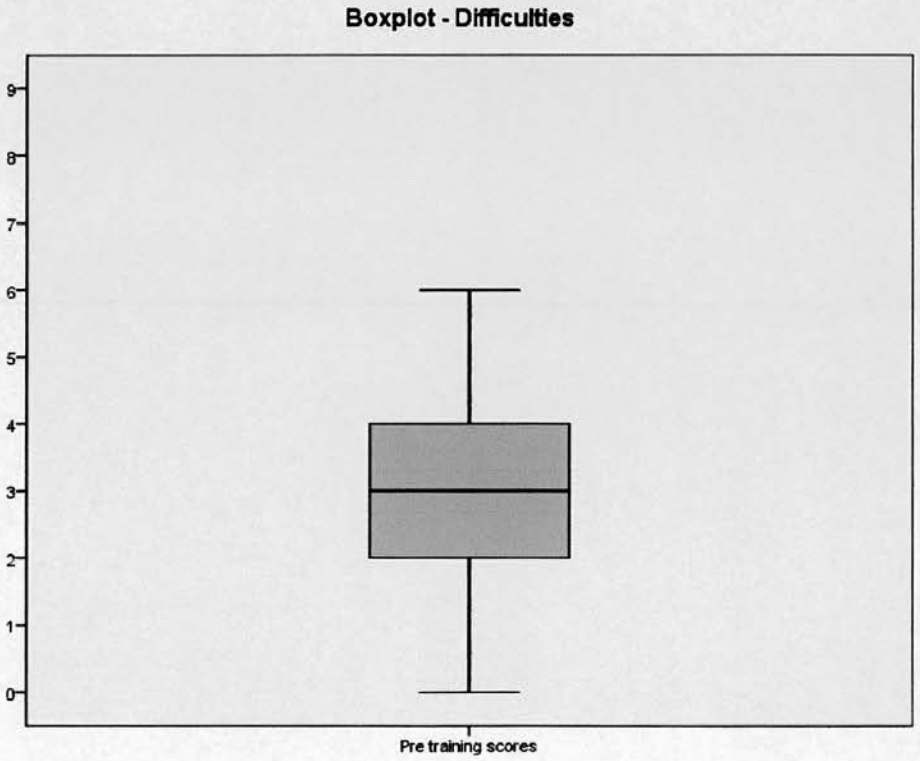
Delayed – cognitive definitions



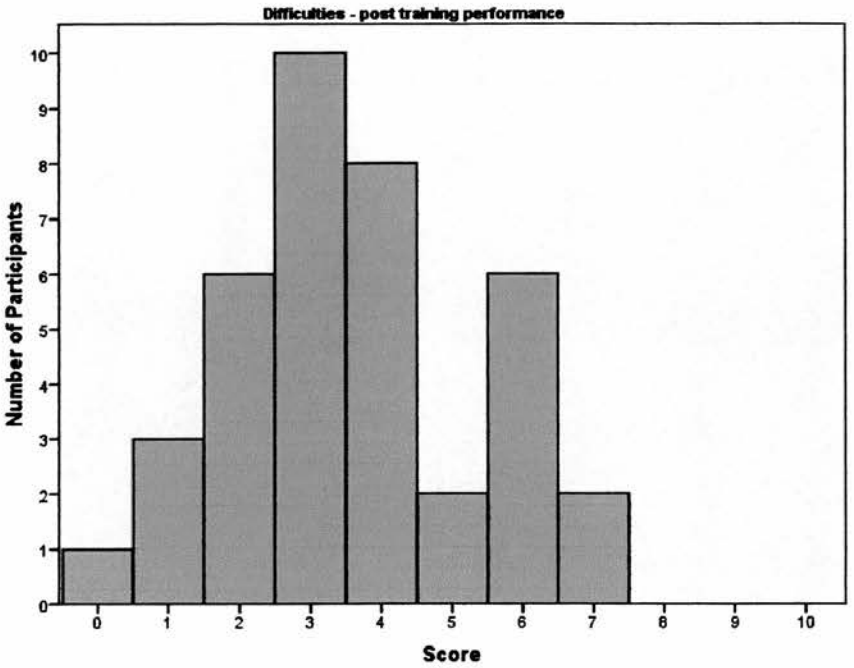


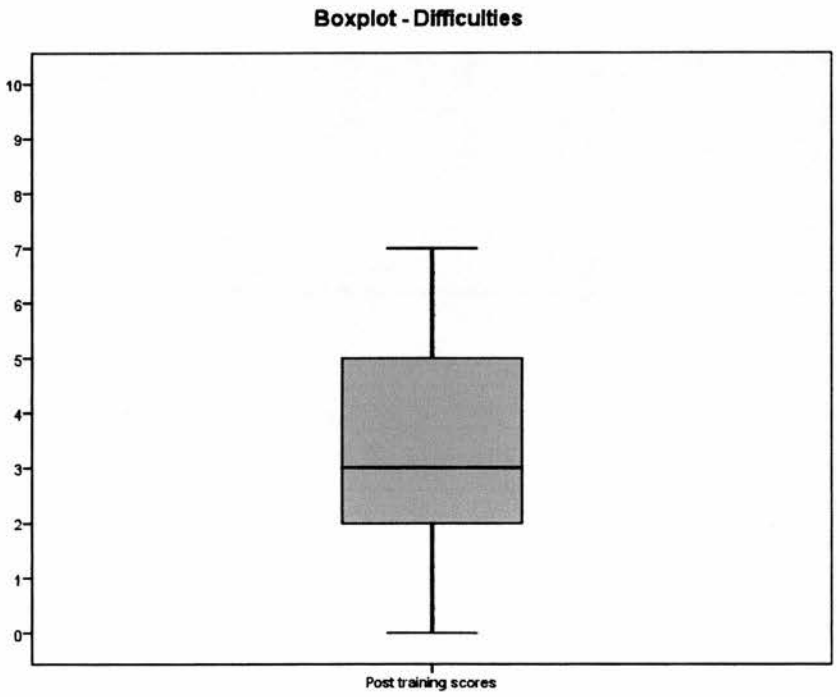
Pre training – cognitive difficulties



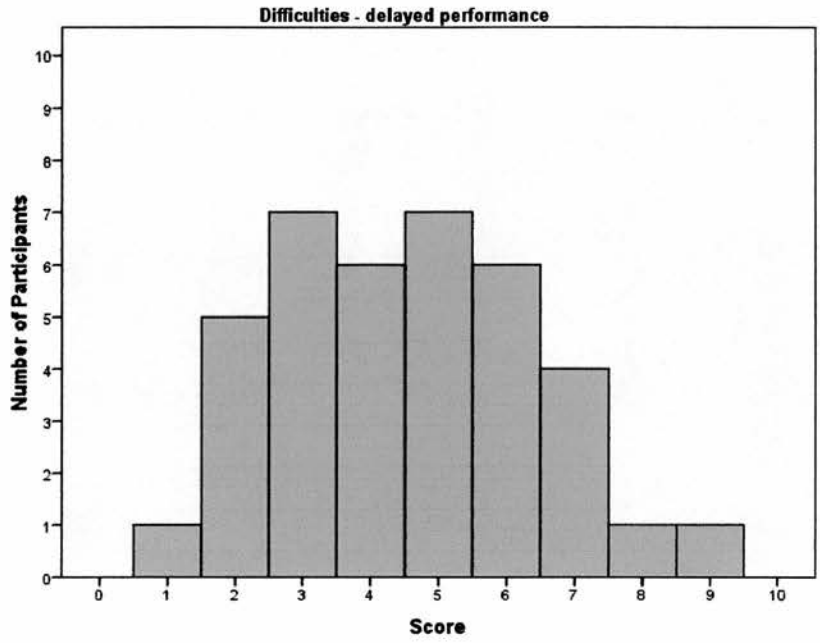


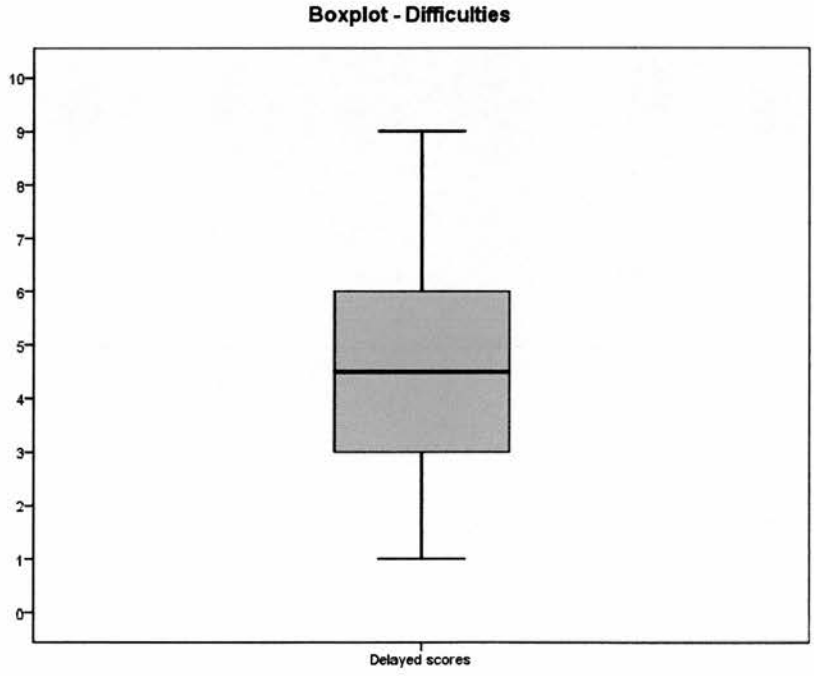
Post training – cognitive definitions



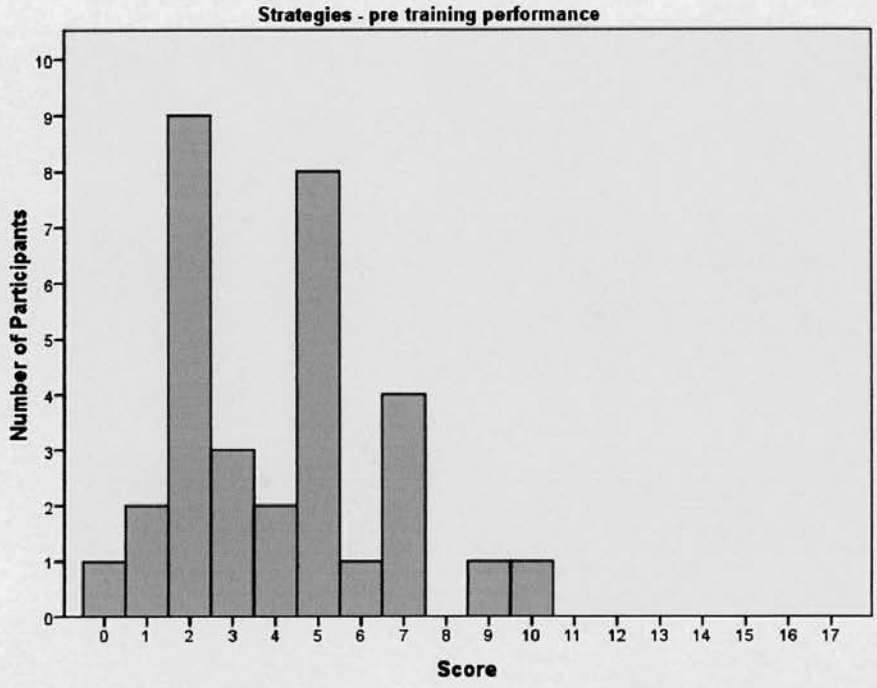


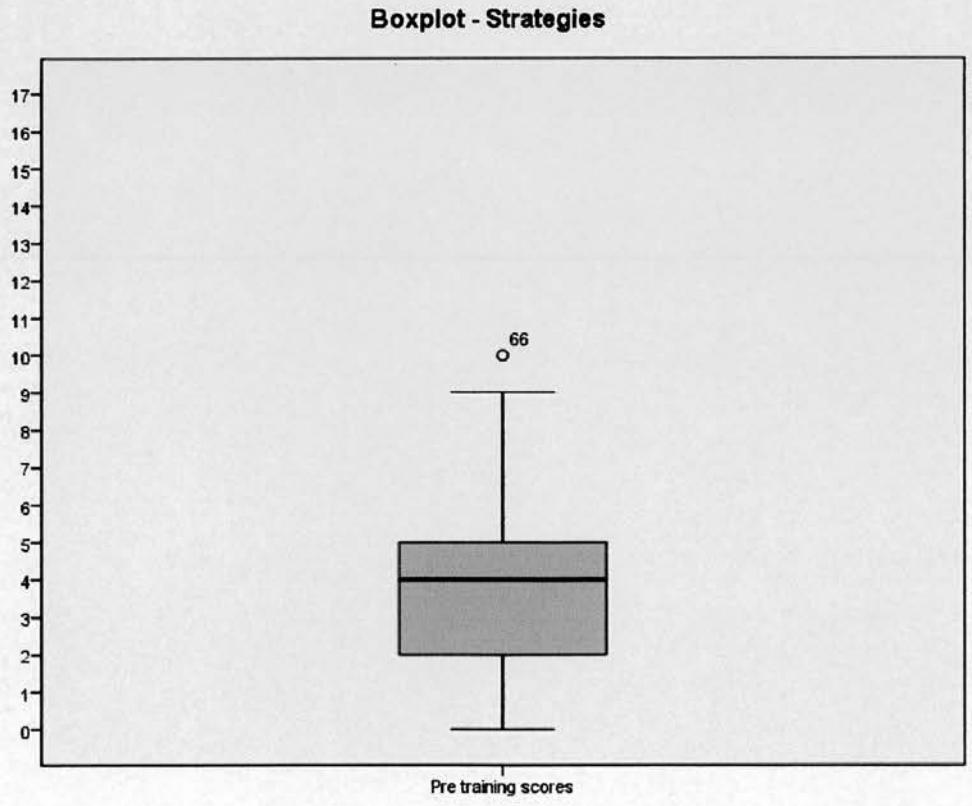
Delayed – cognitive definitions



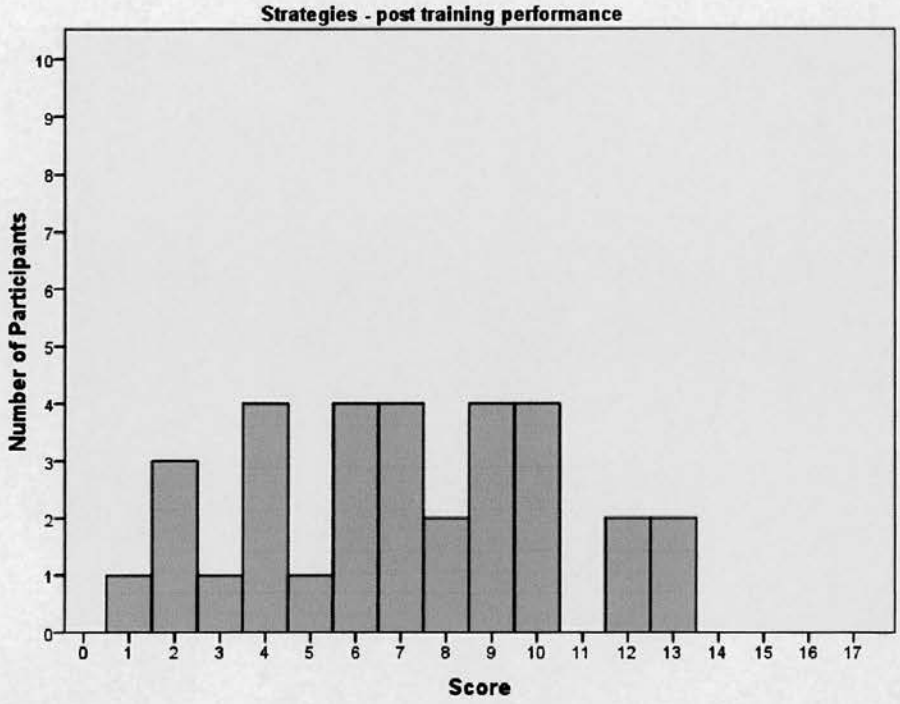


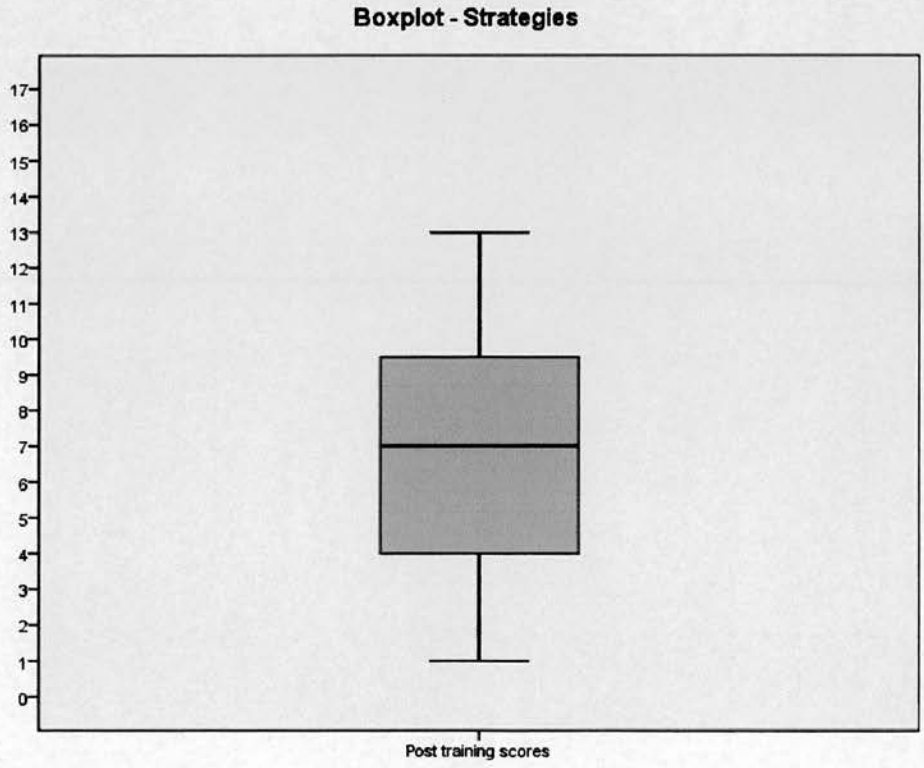
Pre training – strategies



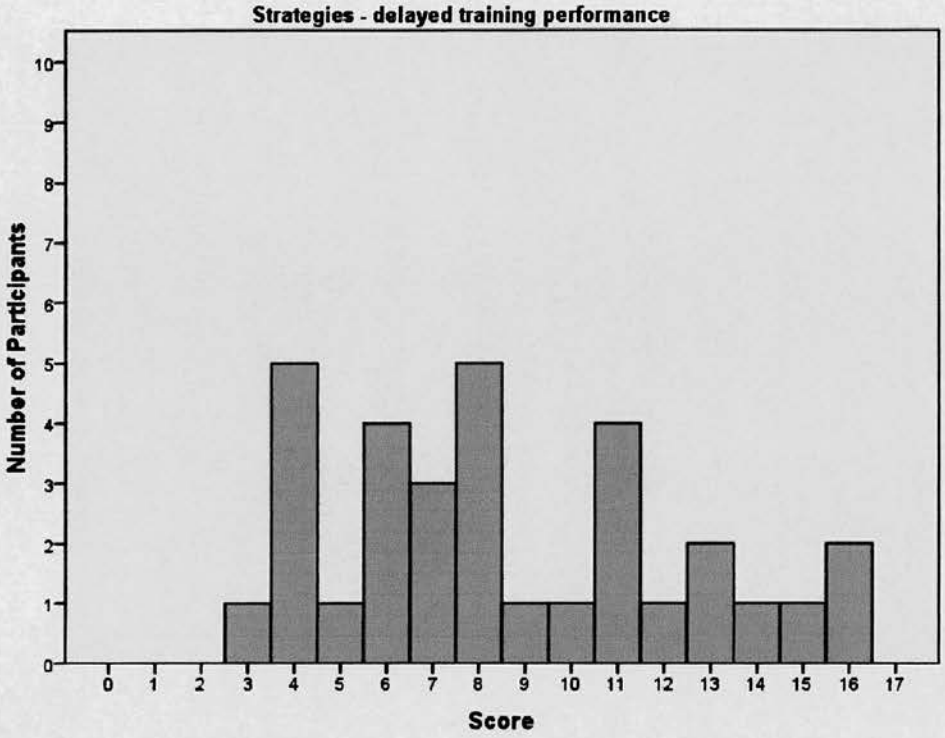


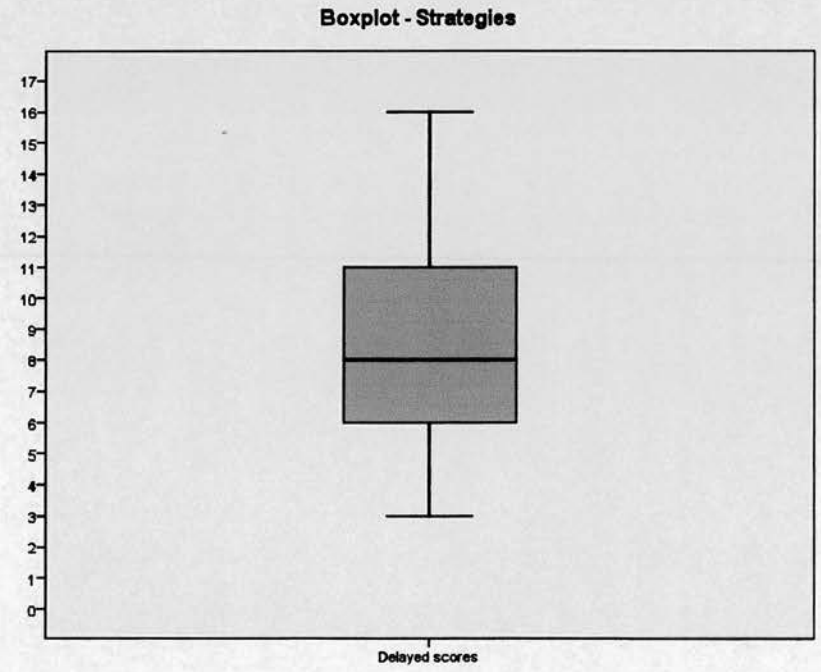
Post training – strategies





Delayed – strategies





Appendix Eleven – Qualitative Interview Schedule

Qualitative Interview Schedule

START OF INTERVIEW

General question

- Tell me what you remember about the training?

SPECIFIC AREAS BEING EXAMINED

These questions will be used if participants struggle to talk

AREA A (Participant Knowledge)

- Tell me what topics were covered during the training
  PROMPTS – Subjects, exercises, themes

AREA B (Practical Utilisation)

- Tell me what changed, if anything as a result of the training
  PROMPTS – work, personal, other areas of life

Expansions

- Can you expand on that…
- Can you tell me more…
- Can you give me an example…
- What do you mean by that…
- Can you tell me how…

The aim is to get participants talking as much as possible so that I can explore the practical utilisation of the training. Responses will be examined to ensure that participants are kept safe in their responses (i.e. they do not deviate into personal areas that they are unhappy talking about). This is unlikely since the topic of training is neutral rather than a more traditional 'illness specific' area of investigation.

Appendix Twelve: Part Two – Letter granting ethical approval

Telephone
Facsimile:
Email:

10 December 2008

Dear

Study title: **An investigation into care staff knowledge of the concept of learning disability and to whether a training package can alter any deficits in this knowledge**

REC reference:
Amendment number:
Amendment date:

The above amendment was reviewed at the meeting of the Sub-Committee of the REC comprising the Chair of Committee 2, Vice Chair of Committee 1 and Vice Chair of Committee 2.

Ethical opinion

The members of the Committee present gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

Approved documents

The documents reviewed and approved at the meeting were:

Document	Version	Date
Protocol .	3	
Participant Consent Form	2	
Notice of Substantial Amendment .		
Letter of invitation to participant	5	
Covering Letter		

R&D approval

All investigators and research collaborators in the NHS should notify the R&D office for the relevant NHS care organisation of this amendment and check whether it affects R&D approval of the research.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

Please quote this number on all correspondence

Yours sincerely

Scientific Officer

Appendix Thirteen: Part Two – Letter granting research and design approval

Date
Our Ref

Enquiries to
Extension
Direct Line
Email

Dear

Project Title: **An investigation into care staff knowledge of the concept of learning disability and to whether a training package can alter any deficits in this knowledge**

Amendment no:
Amendment date:
Ethics ref:

Thank you for sending a copy of the amendments to the above project relating to changes to the protocol, consent form, letter of invitation and change of end date.

This letter is confirmation that these amendments do not alter local NHS R & D management approval of the project.

Kind regards

Yours sincerely

Research & Development Manager

Appendix Fourteen: Part Two – Letter of invitation to interview

PLEASE NOTE: ALL LOGOS AND NAMES HAVE BEEN REMOVED TO PROTECT CONFIDENTIALITY – AS A RESULT ONLY THE BODY OF THE LETTER HAS BEEN INCLUDED

Dear Participant

You attended a course ran by our department as part of a research project entitled 'Understanding the Concept of Learning Disability'. I would like to thank you for taking part in this project.

The results of the questionnaires have been gathered and analysed. They indicated that after receiving the training, carers significantly improved their knowledge of learning disability and its associated deficits. This knowledge improvement was maintained when re-measured one month after training.

Due to the success of the project I would like to interview 10 of the original participants to examine your experience and opinions about the training. This will help our department determine whether it would be useful to provide this training on an ongoing basis. Each interview would be tape recorded so that I can be transcribed and compared to the others. The transcripts will be examined for repetitive themes.

The interview will take no longer than an hour and will take place locally. You will be paid £10 expenses for completing the interview. Should you wish to take part in an interview, please call me on XXXXX XXXXXX. I would be delighted to arrange a convenient time to meet you.

Yours Faithfully

(Details removed to protect confidentially)

Appendix Fifteen: Part Two – Participant consent form

Project Consent Form
University of Edinburgh – Doctorate in Clinical Psychology

I (*please print name*) _____ agree to take part in this interview, which examines my opinion on the training 'understanding the concept of learning disability'.

I am aware that this interview will be tape recorded so that it can be transcribed for theme analysis. My name will be removed from the transcript along with any other identifying details. No data will be published that can identify my organisation, my clients or me.

I understand that the data from this interview will be made anonymous and written up as part of a thesis. This thesis will be submitted to the University of Edinburgh for examination. I am also aware that the researcher intends to write a paper for submission to an academic journal based on the thesis and anonymous data.

The interview will not take longer than one-hour and ***upon its completion*** I will receive £10 for my expenses.

PARTICIPANT

I understand the conditions outlined above

I agree/do not agree (*delete as appropriate*) to take part in the interview.

Signed: _____
Name: _____
Date: _____

RESEARCHER

I have noted and acted in accordance with the above participant's decision to take part in/withdraw (*delete as appropriate*) from the interview.

Signed: _____
Name: Tamsin Williams
Date: _____

Appendix Sixteen: Textual occurrences of master themes

Theme: struggling to remember

Part'	Page	Line
1	1	10
1	1	39
1	2	3
1	2	9
1	2	26
1	2	42
1	3	5
1	3	25
1	3	42
1	4	42

Part'	Page	Line
1	13	23
2	1	9
2	7	15
2	7	30
2	7	38
2	14	21
2	19	6
3	1	23
3	1	35
3	2	2

Part'	Page	Line
3	2	27
3	5	21
3	6	21
3	7	35
3	8	26
3	9	33
3	12	50
3	13	17
3	24	23
4	1	24

Part'	Page	Line
4	1	35
4	3	2
4	6	41
4	15	33
5	1	35
5	2	7
5	3	39
5	4	15
5	4	40
5	11	45

Theme: using own examples to make sense of this training

Part'	Page	Line
1	2	46
1	5	31
1	7	21
2	6	29
2	6	46
2	13	40
2	15	11
3	17	26
3	23	7
6	7	27

Part'	Page	Line
6	8	7
6	16	1
6	16	33

Theme: overestimation of clients

Part'	Page	Line
4	3	25
4	13	8
4	14	34

Theme: importance placed on experience/rapport with clients

Part'	Page	Line
2	5	37
2	6	8
2	8	35
2	9	19
2	9	33
2	15	20
2	17	22
2	17	27
2	21	35
3	9	45

Part'	Page	Line
3	10	3
3	11	19
5	7	14
5	9	11
6	2	21
6	3	21
6	3	33
6	4	33
6	5	37
6	7	17

Part'	Page	Line
6	10	12
6	15	3
6	17	42
6	18	8

Theme: using own examples to make sense of this training

Part'	Page	Line
1	2	46
1	5	31
1	7	21
2	6	29
2	6	46
2	13	40
2	15	11
3	17	26
3	23	7
6	7	27

Part'	Page	Line
6	8	7
6	16	1
6	16	33

Theme: managing rifts between personal beliefs and practice

Part'	Page	Line
1	9	7
1	9	29
1	9	42
5	16	22
6	10	32

Theme: the importance of self reflection

Part'	Page	Line
6	2	45
6	6	13
6	15	26
6	18	16
6	18	37

Theme: awareness of difference in ability (clients vs. general population)

Part'	Page	Line
1	3	13
1	5	2
1	5	17
1	7	9
1	7	29
1	9	21
1	10	28
1	11	16
2	1	28
2	2	4

Part'	Page	Line
2	2	20
2	2	39
2	2	46
2	3	33
2	4	38
2	9	7
2	10	29
2	14	45
3	1	17
3	4	28

Part'	Page	Line
3	17	38
3	18	11
3	23	4
4	3	19
4	3	43
4	5	11
4	5	31
5	10	36

Theme: working with the concept of normalisation

Part'	Page	Line
3	3	10
3	4	25
3	4	36

Theme: importance of ability to empathise with clients

Part'	Page	Line
1	5	10
1	8	25
3	18	34
3	18	38
5	15	45
6	7	45

Theme: must be mindful of client's wishes and choices

Part'	Page	Line
5	16	9
5	16	19

Theme: training provides confidence

Part'	Page	Line
2	14	23
2	18	29
3	16	4
3	16	25
4	7	11
4	7	41
5	11	2
5	11	11
5	11	27
5	12	46

Part'	Page	Line
5	13	29
5	17	49
5	18	3

Theme: belief that training and experience are separate

Part'	Page	Line
6	22	18

Theme: training affirming practical approaches

Part'	Page	Line
5	6	22
5	9	30
5	17	11

Theme: fear of academic/technical elements of training

Part'	Page	Line
6	13	6
6	13	25
6	22	8
6	22	34

Theme: fear of negative judgement during the training

Part'	Page	Line
6	13	46
6	14	43

Theme: importance of being caring

Part'	Page	Line
5	13	18
6	1	37
6	20	10
6	20	29
6	23	30
6	23	44

Theme: balancing risks vs. carers duty to intervene

Part'	Page	Line
4	4	22
4	4	39
4	5	35
4	5	18
4	10	18
4	13	44
6	19	16

Theme: being unsure of what to do (when the training is not working)

Part'	Page	Line
5	5	10
5	5	34
5	5	43

Theme: feeling abandoned and left to 'get on with it'

Part'	Page	Line
2	19	46
2	20	13
2	22	31
2	25	5
3	11	41
3	15	37
4	7	4

Theme: feeling supported by organisation

Part'	Page	Line
6	21	41

Theme: an awareness of the diverse nature of the client group

Part'	Page	Line
6	4	26
6	4	45

Theme: enjoyed this training

Part'	Page	Line
1	11	28
3	21	43
4	10	37
5	19	27
6	23	22

Theme: feeling that training was beneficial

Part'	Page	Line
1	12	42
2	27	15
2	24	9
3	15	31
3	21	33
4	7	1
5	20	39
6	21	1

Appendix Seventeen: Textual occurrences of concepts

Concept: what is a learning disability

Part'	Page	Line
2	7	30
3	12	30
3	12	47
3	13	26
4	1	43
4	2	4
5	1	35

Concept: attention

Part'	Page	Line
1	3	34
1	8	36
1	10	40
3	23	35
4	5	21
5	7	45

Concept: perception

Part'	Page	Line
1	3	14
6	6	35

Concept: time perception

Part'	Page	Line
2	1	25
2	1	37
2	10	36
2	10	42
3	7	5
4	6	8
5	4	7
5	4	21
5	4	46
5	5	43

Part'	Page	Line
6	8	7
6	8	15

Concept: short-term memory

Part'	Page	Line
3	8	3
3	23	31
6	2	33
6	11	1
6	11	36

Concept: communication

Part'	Page	Line
1	6	11
1	6	42
1	6	32
1	7	41
1	9	6
3	8	20
3	8	29
4	3	13
4	7	29
5	4	2

Part'	Page	Line
5	6	27
5	11	35
5	11	48
5	12	26
6	1	19

Feature

Training care staff about the concept of learning disability

A one-day training course that significantly increased care workers' knowledge is described by Tamsin Williams and her colleagues

Summary

This article reports on a study that examined the effect of a one-day training course for support staff on their knowledge about the concept of learning disability, common cognitive difficulties associated with learning disability, and strategies to address these. Knowledge was assessed immediately after the training session and at one month. Increases in attendees' knowledge was statistically significant and the increase was maintained or increased one month after training.

Keywords
Training, learning disability, knowledge

THE CONCEPT of 'learning disability' is socially constructed (Russell *et al* 2005) and a range of different terms has been used to describe people with a learning disability over time (Digby 1996) and in different parts of the world (Emerson 2001). According to the World Health Organization (1992), to be diagnosed with a learning disability an individual has to have:

- A significant impairment of intellectual functioning; that is, an intelligence quotient (IQ) of less than 70.
- A significant impairment in two or more areas of daily living.
- And these problems must have been apparent before the individual reached the age of 18.

The term 'intellectual disability' is increasingly being adopted in the UK (Reid 1997), partly to reflect the cognitive difficulties associated with having a learning disability (Russell *et al* 2005). People with a learning disability often experience specific cognitive deficits in several areas (Emerson *et al* 1998) including attention, perception, time-perception, short-term memory, expression, comprehension and coping with change (MacKinnon *et al* 2004).

To be able to provide adequate support to an individual with a learning disability carers should have an understanding of the cognitive difficulties the client may experience and be aware of a range of strategies that may help. Meeting the individual needs of a client is linked to the training and knowledge base of staff (Holburn and Vietze 2002) and trained carers providing an individualised, needs-focused service are vital (Fraser *et al* 1998).

Previous research found staff knowledge of the definition of learning disability (McKenzie *et al* 1999a) and associated duty of care towards clients (McKenzie *et al* 1999b), to be mixed and generally low, with some staff unclear about what a learning disability was and when they should exercise their duty of care to protect clients from harm. Staff training, however, increased knowledge about both of these areas, and the changes were sustained at a 12-month follow up (McKenzie *et al* 2000). However, there has been no research examining carer understanding of the cognitive deficits commonly associated with learning disability and whether training can improve this and knowledge of potentially helpful strategies.

The training course

Support staff attended a one-day training course about the concept of learning disability, common cognitive difficulties associated with learning disability and strategies to address these. Their knowledge was assessed immediately after the training and one month later. Ethical approval was obtained from the local NHS research ethics committee.

It was hypothesised that:

- There would be a statistically significant increase, following training, in participants' ability to identify the criteria for diagnosing a learning disability.
- There would be a statistically significant increase, following training on participants' ability to define the concepts of attention, perception, time-perception, short-term memory, comprehension and expression; state how difficulties with these

Table 1 Example of the scoring system for responses to the question 'How would difficulties with attention impact on a client's day-to-day functioning?'

Concept	Score 1 point	Sample correct answers
Problems *following instructions.*	Experiencing problems carrying out instructions or engaging in tasks or activities.	'Would affect their ability to carry out tasks.' 'Would not... be able to comply.' 'Difficult to complete tasks.'
Problems *maintaining concentration* or being *easily distracted.*	Experiencing problems maintaining concentration, or focusing on the most important event, losing concentration or coming 'off task'	'Cannot focus on what they are doing.' 'Inability to follow through a task, diverting... .' 'Not able to concentrate on the task.'
Confusion.	Behaving or appearing confused, tired, dazed or as if they do not know what is going on	'Possibility of confusion.' 'Not understanding.' 'Confusion, uncertainty.'

might affect the day-to-day functioning of a person with a learning disability and provide examples of how they would help someone compensate for the cognitive difficulties.

Procedure

Letters of invitation were given to local social work managers and distributed to all care providers offering services to adults with a learning disability. Participants attended one, six-hour training session, based on the training package outlined below. Participants completed a consent form and pre-training questionnaire on the day of training. They completed further identical questionnaires at the end of the training day and a month later.

Training package

The training was based on the pack 'Understanding Learning Disabilities' (MacKinnon *et al* 2004) which covers the definition of learning disability and its associated cognitive difficulties. A variety of teaching methods were used including lecturing, video, group discussion and practical exercises.

A questionnaire was designed for the study to cover the key concepts covered in the training day. Responses were scored using the method adopted by McKenzie *et al* (1999a). The possible range of scores was 0-3. There were three types of questions about the cognitive deficits associated with learning disability. The first asked each participant to define the concept, for example, attention. Responses to these were scored and the scores combined to give a total definition score with a possible range of 0-9. The second type of question asked what types of difficulties their client would experience if they had a problem with this area. This provided a total 'cognitive difficulties' score with a possible range of 0-20. Finally, each participant was asked to give examples of techniques that they could use to minimise any difficulties experienced by the client in the target area. This gave a total 'strategies' score of between 0 and 20.

Each point was allocated on the basis of presence or absence of key information in the responses to each question. A scoring system was devised based on a thorough literature review and consultation with a panel of experienced learning disability practitioners. Table 1 illustrates an example of the scoring system for responses to the question 'How would difficulties with attention impact on a client's day-to-day functioning?'

Analysis

The data were examined: parametric tests were used when the data was normally distributed and non-parametric tests were used when it was not. Any outliers in the data were identified and removed.

Results

Table 2 illustrates the mean, standard deviation and median of participant scores, before, immediately after and one month after training.

Discussion

The main results of the study indicated that the training day resulted in a statistically significant increase in staff knowledge in relation to a definition of a learning disability, defining common cognitive difficulties experienced by people with a learning disability, identifying ways these might affect the day-to-day functioning of the person and indicating effective strategies to overcome this. In addition, participant knowledge levels were significantly higher than their pre-training levels and did not fall significantly after a one-month delay (and in some cases continued to increase). This suggests that the knowledge was retained for that period. The study showed medium to large effect sizes.

It is important to know whether training input over a relatively short period of time can be effective in increasing knowledge

These findings are consistent with previous research which has found that staff training increases knowledge in relation to a range of areas (Lowe *et al* 2007, McGill *et al* 2007, McKenzie *et al* 2000, McKenzie *et al* 2002), although only the latter two studies had training that was of a similar duration to the present study. The remaining studies provided more intensive input over longer periods. As staff training requires a lot of resources, in terms of cost (Ziarnik and Bernstein 1982) and staff time (Allen *et al* 1990) it is important to know whether training input over a relatively short period of time can be effective in increasing knowledge. The present study suggests that a single day is sufficient to have at least an initial impact on staff knowledge.

A second consideration is whether knowledge gains that result from staff training are maintained in the longer term. The evidence here is unclear, with some researchers suggesting that gains are often not maintained (Lowe *et al* 2007, Tierney *et al* 2007), while others have found that gains have persisted over a one-year period (McKenzie *et al* 2000). The present study found that increases in knowledge were sustained at one month follow up.

While this is insufficient to indicate what effect the training will have in the longer term, there are questions raised by the fact that knowledge in some areas was actually higher one month after training than immediately after training. Participants at follow up may simply have referred to the handout provided at the training session and used this to answer the questions. If this was the case, however, it would be expected that significant increases in knowledge would have been shown across all areas measured. Second, while the handout provided general information, the participants were being asked to apply this information to clients that they supported; that is, consider how they would use the information in practice. This suggests that some consolidation of learning was occurring.

Learning generally occurs as a result of the student engaging in three processes: actively taking part in what is being taught, thinking about this and consolidating the material by placing it in the context of prior knowledge and experience. They then create new ideas or concepts as a result of the consolidation (Northedge 1990).

The participants in this study may have found that they were able to observe concrete examples of common cognitive difficulties in the clients they supported when they returned to work, allowing them to consolidate and expand on the concepts they had learned. This would then have been reflected in increased scores at follow up (Northedge 1990). It may have been more difficult for the same processes to apply in relation to strategies for overcoming these difficulties, as many require a consistent team approach or guidance from a health professional. A one-month period is likely to have been too short for such new strategies to be consistently implemented.

This leads to a third consideration: the effect of training on staff practice. The present study indicated that the training day resulted in significant increases in knowledge, but the impact of these changes on staff practice was not examined because of time and resource constraints.

The impact of training on staff practice appears to be mediated by attributions; that is, the beliefs that an individual holds about an event or occurrence, for example, the beliefs that a staff member holds about a client's challenging behaviou

Table 2. The mean, standard deviation and median of participant scores, before, immediately after and one month after training

	Pre-training			Post-training			One month follow up		
	Mean	SD	Median	Mean	SD	Median	Mean	SD	Median
Definition of learning disability	0.48	0.71	0.0	1.48	1.1	2.0	1.21	0.96	1.0
Total 'cognitive definitions' score	4.31	1.63	5.0	5.56	1.6	6.0	6.25	1.2	6.0
Total 'cognitive difficulties' score	3.25	1.8	3.0	5.22	2.2	5.0	7.19	2.8	7.0
Total 'strategies' score	3.53	2.5	3.0	7.84	3.0	7.5	8.94	3.7	8.0

(Tynan and Allen 2002, Whittington and Burns 2005). There is evidence that staff are unlikely to change their practice as a result of training unless their underlying attributions regarding their clients are also altered (Hastings 1997, McKenzie *et al* 2002).

Future research, using for example, a periodic service review (McKenzie *et al* 2002), observations of staff (Banister *et al* 1995), staff worksheets and reflective logbooks (Friesner and Hart 2005) could address this limitation. Such strategies have their own difficulties because, for example, it is not possible to control all of the variables '*in situ*' (Noone *et al* 2006) and the presence of an observer can change the dynamics of a situation (Banister *et al* 1995). However if training is to be considered worthwhile, it must ultimately demonstrate an improvement in staff practice.

One concerning result of the study was that, while the training appeared to result in significant increases in support staff knowledge, in general, baseline levels of knowledge on all of the categories examined was poor. These findings are consistent with wider research which has found limited knowledge to be widespread in staff in health and social care services (Lowe *et al* 2007, McKenzie *et al* 1999a, 1999b), in relation to knowledge of what a learning disability is, duty of care and challenging behaviour. This is despite several policy documents and research that has emphasised that care workers should be appropriately trained to provide good quality services (Fraser *et al* 1998, The Scottish Executive 2000, The Scottish Executive 2005, Department of Health 2001). This suggests that a number of staff who work in learning disability services are still not receiving training that is adequate to allow them to identify and meet the needs of the people they support.

Methodological limitations

The present study had some methodological limitations which must be considered. First, the study did not have a control group, therefore it cannot be guaranteed that the increases in staff knowledge that were found were not due to factors other than the training. A second limitation was in relation to the questionnaire used to measure knowledge. Three of the items had 'poor' inter-rater reliability. This may have been because the items related to perceptions and comprehension, which are hard to define precisely.

Summary

The results of the study demonstrated an increase in participant knowledge of the definition of a learning disability, its cognitive components, the difficulties associated with deficits in those cognitive components and the strategies that can be used to help support clients with these difficulties. Participants retained this increase in knowledge one month later.

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